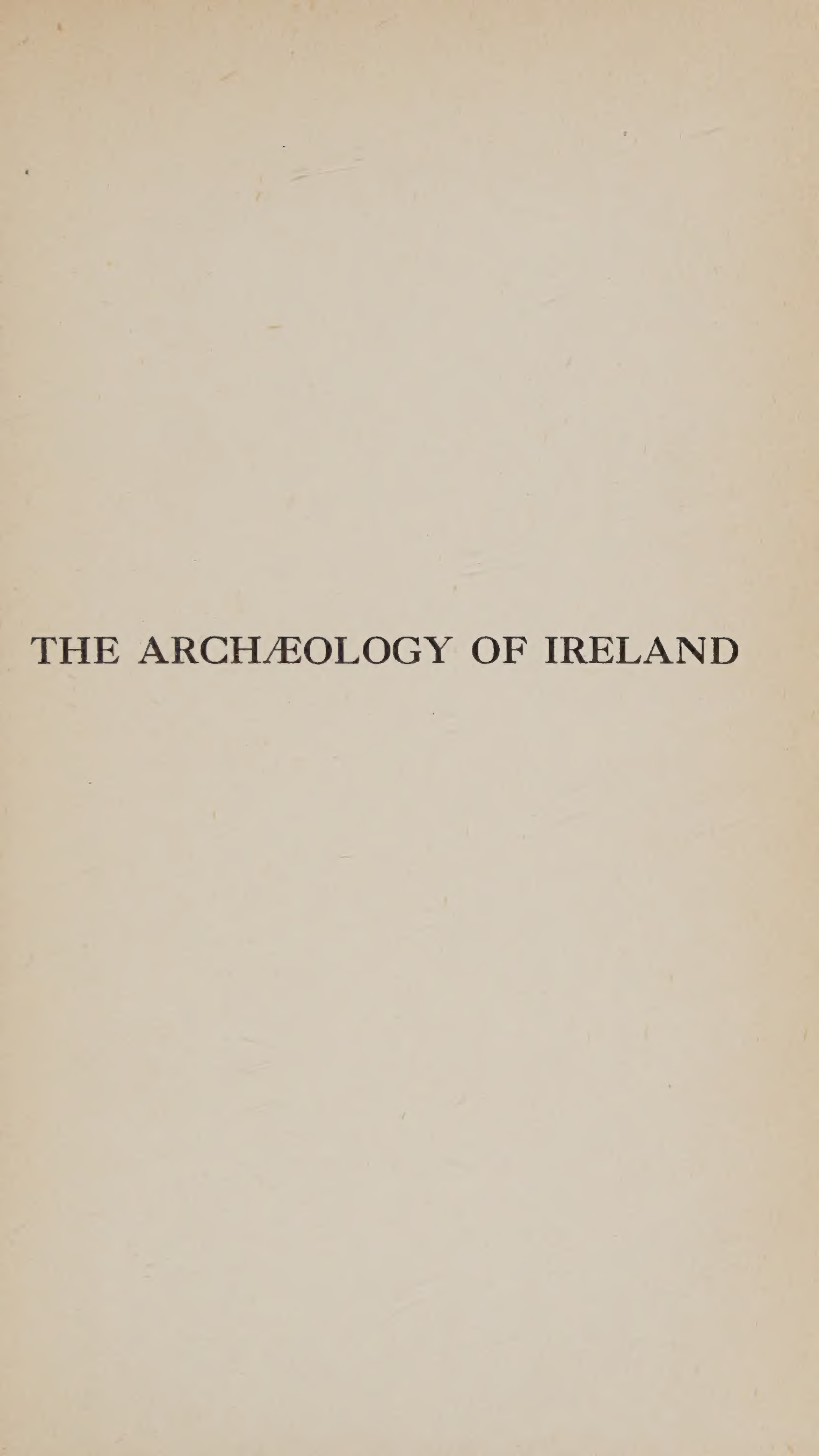
...CHÆOLOGY OF IRELAND

R. A. S. MACALISTER



THE ARCHÆOLOGY OF IRELAND



PART OF THE ANCIENT STAIRWAY, SKELLIG MICHAEL

THE ARCHÆOLOGY OF IRELAND

BY

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WITH 16 PLATES AND 22 ILLUSTRATIONS IN THE TEXT

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I DEDICATE THIS BOOK

TO THE HONOURED MEMORY OF

GEORGE COFFEY

THOMAS JOHNSON WESTROPP

EDMUND CLARENCE RICHARD ARMSTRONG

WALTHER EMANUEL FRIEDRICH BREMER

HENRY SAXTON CRAWFORD

WHO RENDERED HIGH SERVICE

IN THE QUEST FOR HIDDEN TRUTH

PREFACE

THIS work is an attempt to set forth, in chronological order, the evidence at our disposal for tracing the history of material culture in a country recognized by all as being of exceptional archæological interest. The subject is so great that a certain amount of compression and excision has been found necessary. For want of space, chapters on religion and social organization in the various periods of ancient Irish history, which had been drafted for inclusion, have had to be excised. Even on the matters which are selected for treatment, it is impossible to say everything within the limits of a single volume of this kind: throughout the work the reader is referred to books and papers from which fuller information is to be obtained. It is, indeed, my desire to send the reader to the writings of others, in order that he may be induced to investigate the subject for himself. I have very little faith in the value of "peptonized" knowledge.

It would be impossible also to illustrate the subject fully without swelling the size of the book beyond all reasonable limits. Selection is here again necessary: to supplement the illustrations chosen, references are given from which the reader can learn where other illustrations are to be found. In this connexion I have to thank Mr. R. J. Welch of Belfast for permission to use a block made from his photograph of the unfinished cross at Kells; the Royal Irish Academy, for leave to reproduce part of Miss Stokes's drawing of the Castledermot cross; the Royal Society of Antiquaries of Ireland, for the loan of several blocks; and Messrs. Hodges & Figgis of Dublin, for permission to reproduce part of one of the plates in Stanford Robinson's *Celtic Illuminative Art*, published by them.

A few brief general hints on the choice of books for further study may here be useful. The works of the eighteenth-century writers, Molyneux, Vallancey, and to a lesser degree

Ledwich, cannot be wholly neglected, for, in the midst of much that we now know to be absurd, they have preserved facts not to be found elsewhere about monuments which have now disappeared. Their seventeenth-century predecessor, Ware, was a man of much more scientific instincts, and his works, although historical rather than archæological, are still indispensable. Coming to the nineteenth century, Villaneuva, Henry O'Brien, Marcus Keene, and Sir William Betham may be safely ignored; their works do not possess the slightest value, except when the last-named kept to the genealogical work which was his proper province. A powerful contrast to these is presented by the great trio, George Petrie, John O'Donovan, and Eugene Curry (afterwards O'Curry), who were a little later in date. These men laid the foundation of all subsequent study. So great were they, that we are apt to forget that the last of them died over sixty years ago: it needs a struggle to remember that we have, or ought to have, passed beyond the stage in the development of knowledge at which they laid down their pens. It is the fate of the greatest of men to become "a back number": it is the fate of the strongest foundation to be buried out of sight. We must not neglect any of their works; but we must not be fettered by the belief that they are infallible, and still less must we imagine that they have said the last word on any of the subjects with which they dealt. The same may be said of the lesser lights, the Earl of Dunraven and Margaret Stokes. Wilde's richly illustrated catalogue of the Royal Irish Academy's collection is invaluable—in fact, it is so good that it has almost paralysed archæological illustration in Ireland ever since its appearance!

The end of the nineteenth century and the beginning of the twentieth was a time of taking stock and of compilation: except for the work of Coffey and Westropp, and the patient studies of Crawford in early Christian art, few original contributions to the subject were made. Wakeman's *Handbook of Irish Antiquities* does not profess to be more than a popular introduction to its subject. More ambitious is Wood-Martin's *Pagan Ireland*, useful but unsystematic and uncritical. It has a good classified bibliography of papers published up to the date of its appearance (1895). This bibliography is amplified in a later work by the same writer, otherwise of little value, called *Traces of the Elder Faiths of Ireland*. P. W. Joyce's *Social History of Ancient Ireland* (London 1903), which makes

large use of the manuscript as well as of the archæological evidence, is on a far higher plane than these other works.

The present writer published in 1921 a course of lectures entitled *Ireland in Pre-Celtic Times*. It was at the time intended to follow it with a companion volume on *Ireland in Celtic Times*, but for various reasons the intention was abandoned, and the material collected for that volume has for the greater part been utilized in these pages.

Books on special branches of the subject are referred to, as occasion arises, in the footnotes. But a word must be said of the periodical publications, which contain most of the material for a study of the subject. Their contents are of very varying merit: good scientific articles may be found in their pages side by side with exhibitions of hopeless dilettantism. There is no better study than these periodicals for sharpening the critical instinct! Much of their contents is concerned with historical, genealogical, or biographical matters, which, though valuable, are outside the scope of the present study. The following is a list of the chief periodicals to be taken into account by the student of Irish Archæology:—

The Dublin Penny Journal (1832-1835), a pioneer popular magazine, containing articles of real value by Petrie and others, interspersed among the stories, poetry, and miscellanea which make up the bulk of its contents.

The *Transactions* (beginning 1786), and the *Proceedings* (beginning 1836), of the *Royal Irish Academy*, the chief scientific body in Ireland. After 1902 the successive volumes of its publications are divided into three sections, separately paged: *A* (Mathematics and Physics), *B* (Geology, Chemistry, and Biology), and *C* (Archæology, Philology, Polite Literature). When not otherwise specified, *Section C* is to be understood in all references in the present volume.

The *Journal* (beginning 1849) of the *Kilkenny Archæological Society*, which in 1869 became the *Royal Historical and Archæological Association of Ireland*, and in 1890 the *Royal Society of Antiquaries of Ireland*. (It is useful to preserve these different titles in references, as affording a clue to the date of publication of the article referred to.)

The Ulster Journal of Archæology (1853-1862), a creditable publication, the title of which was used later for a different journal of a rather more popular type (1895-1911).

The Cork Historical and Archæological Society (founded

1891; second series of its journal begun 1895); the *Galway Archæological and Historical Society* (begun 1900); the *County Louth Archæological Society* (begun 1904); the *Waterford Archæological Society* (1894-1914). The *Belfast Naturalists' Field-Club* and the *Belfast Philosophical Society* are chiefly interested in scientific or technological matters, but they also pay attention to Archæology; their papers, however, are frequently published in abstract only. Of less importance than these are the *Breiffny Antiquarian Society*, the *North Munster Archæological Society*, and the *Kerry Archæological Magazine*.

In the interests of Continental scholars, who are displaying an increasing interest in the antiquities of Ireland, and who may not have access to any means of correlating the proper forms of the place-names with the map-makers' abortions, I have very reluctantly decided to give most of the place-names in the corrupt form in which they appear in the current maps: although there is nothing good that can be said for them. They have played endless havoc with the scientific study of Irish topography. Were this book written for Irish readers alone, I should not hesitate to use the native place-names in their proper native spelling, so far as this is now recoverable. No one writing a history of French literature would make concessions to readers who were too lazy to find out how to pronounce "Dumas" or "Chateaubriand," by writing "Dooma" or "Shattobryong"; and there is no reason for extending any greater consideration to the Irish reader who refuses to learn how to spell and to pronounce aright the names of places in his native country, whether the inhibiting cause be prejudice, indolence, incuriosity, or what not. The above imaginary perversions of French names are not worse than the cartographers' renderings of Irish names. I have, however, taken the risk of incurring a charge of pedantry by endeavouring to get rid, so far as may be, of the ugly and misleading symbol *gh*. This may have represented the Irish guttural *ch* in Elizabethan days, but it does so no longer; and it has induced most woeful corruptions in pronunciation as a consequence. *Connacht* (more properly *Connachta*) is spelt "Connaught," and under the influence of the English word *naught* comes to be pronounced "Connawt": *Drocheda* (more properly *Droichead Atha*, "Ford-bridge") is spelt "Drogheda," and so comes to be pronounced "Drog-heeda" by the foreigner, and the hardly

less objectionable " Drawada " by the native. A distinction (which it is high time should be dropped and forgotten) is made between the Scottish *loch* (which is right) and the pseudo-Irish *lough* (which is wrong). In the hope of restoring the guttural to its full rights, I have ventured to write, as approximations to the correct forms, *Fermanach*, *Clocher*, *Monachan*, and some other names, with *ch* instead of the usual but erroneous *gh*. A few names which are probably beyond redemption, such as *Armagh* (properly *Ard Macha*), I have left to their fate. I have ventured also to write *Loch nEach* instead of the current corruption " Lough Neagh " (properly *Loch nEathach*). This gives the guttural its proper sound, and indicates that the initial of the lake's name is really the *E* ; not the *n*, which is an obsolete case-ending transferred from the word " Loch ". The current neologisms " Belfast Lough," " Larne Lough," are ungrammatical, and cannot possibly mean what they are supposed to mean ; the only conceivable meaning of " Belfast Lough " is " Belfast of Lakes ". I have substituted the ancient names, *Loch Laoigh* (pronounced something like *Loch Lee*, but the exact pronunciation cannot be expressed in English letters), and *Inbhear Ollarbha* (pronounced something like *Inver Olarwa*) respectively. I have also tried to free the river at the estuary of which the city of Dublin stands, from its modern and trivial-sounding name " Liffey ". This is not really the name of the river itself, but of the district through which it runs, properly spelt *Life*. In Irish literature, even so late as the time of the Four Masters, the river is not called *Life* but *Abha Life*, " the River of Life ". The real name of the stream itself is *Ruirtheach*.

I have further substituted the simple Irish *óg* (with a mark of prolongation over the *o*) for a final *g* preceded by a long *o*. *Ciaróg* looks much better and less clumsy than *Keerogue*, and runs no risk of being pronounced " Kee-ro-gew " by a stranger. (This is only one of hundreds of names in which the original Irish spelling represents the pronunciation with absolute certainty, to one who takes the slight trouble of finding out what the letters mean, while the Anglicized spelling introduces all sorts of ambiguities.)

When the original form of any place-name has been officially restored, the official form has naturally been used. It is passing strange that individuals (and newspapers) are found to obey scrupulously the mandate of the Norwegian Government for

the (apparent) de-Christianization of Oslo, and that of the Russian Soviets for the Bolshevization of Leningrad; but to rebel when the authorities of their own country determine that Dun Laoghaire shall no longer commemorate that imperfect saint George IV, or that the counties of Leix and Offaly shall no longer serve as memorials of an unpopular royal lady and of her Spanish consort. "Bri Chualann" is a factitious modern substitute, but all the same it is more dignified than the *ruditus asini* "Bray"!—though some of the inhabitants of the township do not as yet seem to have fully grasped this obvious fact.

With envy does one who recalls his own arid school days contemplate the privileges of the boys and girls now growing up under Free State auspices, who are encouraged to take an intelligent interest in the country of their birth. It was not always so; I speak from out of my own experience. Time was when some of us were taught not only to look upon ourselves as aliens in our native land, but even to glory in so being, and to anticipate with craven terror any political change that would "dealienize" us: when our teachers were busy spinning over our eyes cobwebs of prejudice and of a soul-destroying utilitarianism. Some there be, even yet, who have never succeeded in rubbing these away. But those who have done so have reaped a rich reward. They have seen a vision, overwhelming as that of the Hebrew prophet's henchman in the days of old; to whose purblind sight, suddenly illumined as with a Divine flash, were revealed mystic companies of fiery chariots and horses, marshalled on the ancient hills.

R. A. S. M.

December, 1927

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ABBREVIATIONS

Most of the references in the following pages will be found to be self-explanatory; but a few publications, frequently mentioned in the footnotes, are indicated by abbreviations, as follows:—

IPCT.	Ireland in Pre-Celtic Times (Dublin 1921) by the present author.
JCHAS.	Journal of the Cork Historical and Archæological Society.
JGAHS.	Journal of the Galway Archæological and Historical Society.
JKAS.	Journal of the Kilkenny Archæological Society.
JLAS.	Journal of the County Louth Archæological Society.
JRHAAI.	Journal of the Royal Historical and Archæological Association of Ireland.
JRSAI.	Journal of the Royal Society of Antiquaries of Ireland.
JWAS.	Journal of the Waterford Archæological Society.
PBNFC.	Proceedings of the Belfast Naturalists' Field Club.
PRIA.	Proceedings of the Royal Irish Academy.
TRIA.	Transactions of the Royal Irish Academy.
UJA I.	Ulster Journal of Archæology, first series.
UJA II.	Ulster Journal of Archæology, second series.

THE ARCHÆOLOGY OF IRELAND

CHAPTER I

THE COUNTRY AND ITS PEOPLE

The Formation and Nature of the Country

FAR back in the dim ages of the past, thus saith an ancient story, Ireland was peopled by a mysterious folk called *Tuatha Dé Danann*, " The Peoples of the Goddess Danu ". It fell out on a clear winter evening, that a certain Ith, a chieftain of Spain, ascended a tall watch-tower erected in the northern extremity of his country. From that vantage-point he descried a distant land, dim on the remote horizon ; and, moved by curiosity, he set sail thither on a voyage of discovery.

In due time he landed, and was courteously received. As a stranger, who would presumably be neutral in his interests, he was invited to give judgement in a dispute, which happened to have arisen at the moment between the two kings of his hosts, regarding the division of a certain property. Having done so to the general satisfaction, he thought fit to add these words of counsel : *Act righteously ; maintain brotherhood ; be well-disposed one toward another. For good is the land which ye inhabit ; plenteous her harvest, her honey, her fishing, her wheat, and her other yieldings ; moderate are her heat and her cold ; within her borders are all things that ye need.*

Sad to tell, the folk of the land forthwith slew him who had uttered this eulogy ; for they feared lest he should repeat it when he returned to his own people, and so should put it into the heart of some adventurer to come and take the land from them. By this crime they brought upon themselves the very doom which they would have averted. A knightly expedition of the kindred of Ith voyaged from out of Spain, to avenge the deed of blood ; expelled the Tuatha Dé Danann for all their cunning in wizard-craft ; and took their land for an heritage

unto themselves. And though Ith be dead, his words still live on in the ancient vellum page,[1] to teach us how the story-tellers of former times spoke of the land whose history, as revealed in her monuments, we are to study.

It would be irrelevant to the main purpose of this book to describe the complex processes by which Ireland was gradually built up, through illimitable wastes of geological time; and how she acquired the characters thus attributed to her in the glowing pages of romance. These processes have their place in the story; for the presence or absence of this condition or that, favourable or adverse to the advance of human civilization, ultimately depends, in no small degree, upon just such facts of geological history. Here, however, we may take them for granted;[2] we shall begin our study at the stage when Man had already appeared in Europe, and when he might possibly have found opportunity to penetrate as far as Ireland.

While the ice-sheet, which had covered Northern Europe during the glacial periods of the Ice Age, was melting away, most of what is now the island called Ireland was sunk in the depths of the sea. After the retreat of the ice had well begun, there ensued what we may call a race between the rise of the land and the rise of the ocean. On the one hand, the crust of the earth, for long ages distorted by the gigantic weight of the ice-sheet, was endeavouring to recover its spheroidal shape; on the other hand, the ocean received the unimaginably vast stores of water that had been locked up in the ice, and, gaining thus considerably in volume, rose to a higher level.

In various places, especially in Scotland, beach-deposits still remain, which were formed by the sea at this stage of the history of Europe. These are now at a height of 100 feet above sea-level, and are therefore collectively known as the 100-*feet Raised Beach*. There are also remains of a 50-*feet Raised Beach*, the evidence of an intermediate stage in the subsequent emergence.

For a time the sea appears to have had an advantage in some regions; in others it was the land that rose with the greater rapidity. In consequence, the land oscillations which followed the disappearance of the ice-sheet, when studied in detail, are

[1] *Book of Leinster* p. 12, col. i, and other ancient MSS.

[2] The reader desirous of obtaining a clear and brief statement of the geological History of Ireland will find it in Grenville A. J. Cole, *Ireland the Outpost* (Oxford 1919), especially chapter ii. For a fuller account, see *Idem* and T. Hallissy, *Handbook of the Geology of Ireland* (London 1924), where will be found bibliographies of the antecedent literature. For an excellent study of the relation between the geographical peculiarities of Ireland and her human occupation, see W. Fitzgerald, *The Historical Geography of Early Ireland* (London 1926).

found to be full of complexity. But if we view, as a whole, the area affected, we shall see that the land submergence was followed by a land elevation, the height of which was considerably greater than in the present existing conditions. What are now the shallower sea-areas were then dry soil. Great Britain and Ireland enjoyed no insularity, for they were embedded in a plateau which extended northward from the European continent as it is to-day ; reaching as far as Iceland, and absorbing within itself, as inland mountain-masses, what we know as the Orkney, Shetland, and Faerö Islands. Speaking generally, the western shore of this land-projection ran along the present line of 100 fathoms sea-depth, that is to say, between 60 and 100 miles beyond the present western coast of Ireland. The shore of the Bay of Biscay likewise extended far to the west of its present line, so that there was a continuous highway along the sea-coast, from Ireland to the Spanish Peninsula, broken only by the mouths of rivers. Along this highway certain forms of plant and of animal life made their way ; colonies of these survive in Ireland unto this day, especially in the south and west, now cut off irrevocably from their kindred in Lusitania.

Indeed, paradoxical though it may appear, the connexion between Ireland and Lusitania was, if anything, closer than that between Ireland and Great Britain, although the latter area was so much nearer, and formed part of the same continental extension. It was a true instinct that made the ancient framers of legend derive some of the early colonists of Ireland from Spain ! From what was destined to be Great Britain, the future Ireland was sundered by a mighty lake, filling what is now the deepest part of the basin of the Irish Sea. This lake received the drainings of the western rivers of Britain—the Clyde, Mersey, Dee, and so forth—and of the eastern Irish rivers, such as the Boyne, Ruirtheach, Slaney, etc. The lake was relieved of its superfluous waters by a river, which must necessarily have been approximately equal in size to the sum of all these tributaries. Its bed is now entirely submerged in St George's Channel, and in the ocean to the south of Ireland. In addition to the lake waters, this river received into itself the outflow of such important southern water-courses as the Severn on the one side, the Suir, Blackwater, Sabhrann (Lee) on the other.

This lake, and the difficult Cambrian and Cumbrian mountains to the east of it, formed a barrier which prevented the invasion of Ireland by certain plants and animals more or less common in England. Polecats, weasels, moles, snakes, toads, and, among plants, the daffodil and the mistletoe, may be

mentioned among the best-known of the fauna and flora of England which have no native home in Ireland.[1]

Of this stage we have relics in *submerged peat-beds* that have been found, by dredging, at various places outside the present coast-line. These testify to the former existence of forests, and therefore necessarily of dry land, over areas that are now sunk beneath the surface of the sea.

The excessive elevation of the land was no more stable than the excessive submergence had been. Having attained to a maximum, the land began to sink once more; in time it reached such a depth that a point now at the sea-level was, in certain regions, 25 feet beneath it. This second submergence was thus not nearly so deep as the first: the oscillations, like those of a pendulum, gradually lost their amplitude in coming to rest.

The record of the second submergence of the land is called the 25-*feet Raised Beach*. This does not belong to the same series as the two other raised beaches just mentioned. These latter are proved to have been formed *previously* to the last maximum elevation, by the fact that when they are associated with the peat-beds, which are the record of the forests, the peat overlies the beach-deposits; but in similar circumstances, the 25-feet beach overlies the peat, shewing that it was formed *subsequently*.

After this last submergence the land rose once more, slightly exceeding, and then sinking to its present level, and its present configuration. Such, in bare outline, was the process whereby Ireland became separated from the continent of Europe; to fill in the outline, reference must be made to special treatises on glacial and post-glacial geology.

The island which was thus formed possesses a very peculiar configuration. Islands, whatever their geological origin may be, are the apices of submerged mountains or mountain-chains. The highest peaks are therefore, as a rule, somewhere about the middle of the insular area; or else form a backbone, running axially along its greatest length. But Ireland is rather of the nature of an elevated plateau, surrounded by a ring of loftier mountains. The centre of the island is a wide, more or less flat plain, once thickly forested, and now to a large extent covered with the consequent turbaries. In one corner of this plain there lies the most extensive lake now remaining in any of the surviving fragments of the Britain-Iceland extension of the Continent. Through the plain there runs the longest navigable river in the same regions. This river, the Shannon, offers a good illustration of some of

[1] For a very convenient account of the Natural History of Ireland, with lists of British species absent from the country, and of non-British species there present, see George Fletcher (editor), *Geography of Ireland* (Cambridge 1922) pp. 142 ff.

the consequences of a land-profile so unusual. Its source is only a little more than 20 miles from the sea; but its waters have to flow for 214 miles before they can find an outlet.

There are, indeed, few countries of its size so well provided with water-ways. The deep inlets of the west afford a varied choice of harbourage. The first towns in the country were built at the estuaries of the larger rivers; but, by a strange fate, these owe their origin, not to the enterprise of the native population, but to hostile aliens, establishing bases from which to conduct piratical raids. The Shannon bore Frankish merchants with a cargo of wine to Clonmacnois, in the very heart of Ireland, in the year A.D. 548:[1] but four hundred years later, it also bore Víking raiders, who plundered the same place.[2] In the south the Blackwater, the Suir, with its important tributary the Barrow, and the Slaney, are all navigable, at least for small craft, for no inconsiderable distance from their mouths; in ancient times these must have been most important highways through the thick forests which covered much of the country. To the east is the Ruirtheach, which is not navigable for so great a distance as some of the others; but the village now called "Leixlip" stands some 7 or 8 miles upward from the estuary, and its name teaches us that the Scandinavian penetrated thus far, and there caught the leaping salmon (Old Norse *lax-hlaup*, "salmon-leap"). Further to the north the noble Boyne flows through his rich meadows, dreaming, perchance, of the weird legends that men once told of how he first began to flow, and of the terrible monster called the *Mata* which scooped out his valley; of the strange pageants and pomps that crossed his waters as kings were carried forth for burial to the bronze-age grave-mounds of Brugh; of the feats of arms that his banks witnessed, at Ros na Righ and at Crinna; and of the momentous day when Patrick sailed up his waters as far as Trim, there to found one of the earliest sanctuaries in Ireland of the Faith of the Crucified.

The equable temperature and the sufficient rainfall combine with the natural fertility of the soil to make the country, as a whole, a rich pasture-land. For this it has ever been famous. The third-century gossip-monger Solinus,[3] copying Pomponius Mela,[4] goes so far as to say that were the cattle not restrained

[1] R. A. S. Macalister, *The Latin and Irish Lives of Ciaran* (London 1921), pp. 92, 154. On the general subject of trade between Ireland and Gaul see G. Coffey, "Archæological evidence for the intercourse of Gaul with Ireland before the first century," PRIA xxviii p. 96; H. Zimmer, "Ueber direkte Handelsverbindungen Westgalliens mit Irland im Altertum und frühen Mittelalter," *Sitzungsberichte der Preuss. Akademie* 1909-10. Zimmer's views are controverted by Professor Haverfield, "Ancient Rome and Ireland," *English Historical Review* xxviii p. 1.

[2] *Annals of Ulster* A.D. 921.

[3] C. Iulii Solini, *Collectanea rerum memorabilium* xxii 2.

[4] Pomponius Mela, *De Situ Orbis* III viii.

from grazing they would imperil their existence by over-eating! This is not strictly true; but it is conceivable that cattle sometimes swallowed poisonous herbs, and that the cause of their consequent demise was incorrectly diagnosed. However that may be, cattle have at all times been the chief wealth of the people of Ireland. In the ancient literature, especially in the legal documents, cattle appear as one of the most important standards of value, if they were not actually used as a medium of exchange.

On the other hand, there are large tracts of barren country, especially in the west. There, where stretches of uncovered rock alternate with sloppy bogland, successive strata of fugitives, driven by *force majeure* from the better lands of the east, have accumulated throughout the ages. From the days of the misty traditions of the Tuatha Dé Danann, who, so legend tells us, expelled the antecedent Fir Bolg, down to the seventeenth century of *soi-disant* Christianity, "Hell or Connacht" have been the alternatives set before the dispossessed.

Owing to the peculiar coast-wise position of the mountains, the natural boundaries between territories depend but little upon mountain-chains. Rather have the rivers been ever the chief lines of demarcation. Besides these, there is another form of natural boundary which, in Ireland, was of considerable importance. The retreating ice-sheet of the Glacial Period left behind it, among other evidences of its passage, a series of long ridges of gravel, crossing the Central Plain like so many colossal caterpillars. So characteristic of the Irish landscape are these ridges, that their Gaelic name, *eiscir*, in the corrupted from *esker*, has been adopted into the scientific nomenclature of Geology. One such ridge, *Eiscir Riada*, stretches almost across the whole island from east to west. In modern times it has ruled lines of canal and of railway; in ancient times it was at least theoretically the boundary between *Leath Cuinn*, the "Half of Conn [of the Hundred Battles,"] and *Leath Mogha*, the "Half of Mogh-[Nuadhat]"—in other words, the division said to have been made by the two kings named, between the kingdom of Tara in the north, and that of Cashel in the south.[1]

The mineral wealth of Ireland is as capricious as friends and foes alike represent her other qualities to be. There is *copper* in plenty in various counties, but it is not everywhere easy to obtain. *Iron* also exists in several centres, sometimes in very rich ores. *Silver* and *lead* likewise are to be found, in quantities that repay the labour of extraction. In the Bronze Age the

[1] See references under the name *Eiscir Riada* in E. Hogan, *Onomasticon Goedelicum* (Dublin 1910). Modern Geology denies that "Eiscir" is a true "esker".

alluvial deposits of certain of the streams of Co. Wicklow were rich in *gold*; Irish gold was then an important article of trade in Northern Europe, but the supply seems now to be practically exhausted. On the other hand *tin*, to all intents and purposes, is absent altogether: true, some of this metal is to be found in the same county of Wicklow, but in quantities too small to be of any commercial importance. As tin is necessary for the manufacture of bronze, it was a commodity quite indispensable during the Bronze Age; this deficiency in the country's mineral resources had therefore to be supplied by the enterprise of overseas trade.[1]

Definitions

Before we proceed further in our study, it may be well to give a few preliminary words in explanation of certain technical terms, without, however, entering too fully into matters of detail. This will put a reader who may not have paid any special attention to Prehistoric Archæology in possession of sufficient knowledge to follow the discussion profitably.

The *Stone Age* of any region is that earliest epoch in its history during which the use of metals was unknown. The Stone Age of certain primitive peoples, such as the inhabitants of the islands of the Pacific, has lasted down almost to our own day: the Stone Age of Europe came to an end many centuries before the Christian era. The European Stone Age is divided into two periods—the first, of enormous length, is called the *Palæolithic* (Old Stone); the second, which was comparatively short, is called the *Neolithic* (New Stone). During the first, Man lived upon the chase, and was unacquainted with such elementary arts of life as pottery-making and weaving. In the Neolithic period he had acquired a knowledge of the arts just named, attaining to no little skill in their pursuit; and he kept domestic animals and tilled the fields, though he had not yet become acquainted with the use of metals.

Between these two periods there was an era of transition, as yet very imperfectly known. It appears to have been a time when new races, swarming, probably, out of Asia, were entering Europe, each bringing its own contribution to the culture of the Continent. It must be admitted that this explanation of the observed facts of archæology has been attacked in recent years; the grounds of the onslaught hardly seem sufficient, but to discuss them would here be irrelevant.

[1] A list of the geological resources of Ireland, from the commercial point of view, will be found in Cole and Hallissy's *Geology*, cited above. Most of these however were of no practical importance in prehistoric times. See also G. A. J. Cole, "Memoir and Map of localities of Minerals of Economic Importance and Metalliferous Mines in Ireland," *Memoirs Geological Survey of Ireland* (Dublin 1922).

During this intermediate period there were several "facies" of civilization. We can distinguish these by varieties in the forms of the associated implements; though it is as yet impossible to present a complete or certain picture of their mutual relationships. For our present study the most important of the intermediate stages are the *Azilian* and the *Campignian*. The first, which seems to have developed in the south-west of Europe, and which is named after the Pyrenean cave called *Le Mas d'Azil*, where its remains were first observed, displays the following characteristics: (1) the persistence, in a degenerate form, of the flint implements of the latest phase of the Palæolithic Period, while at the same time the skill of the late Palæolithic people in the working of bone, and in pictorial art, disappears; (2) the use of flat harpoons, made of stag's horn, contrasting with the round reindeer-horn harpoons of the Palæolithic; (3) the absence of bones of certain animals, whose remains are regularly found in Palæolithic deposits, but which are now extinct in Europe; (4) the use of tools of minute size (the so-called "pygmy flints"); and of pebbles with strokes and other marks painted upon them, probably with some magico-religious purpose. The Campignian civilization is distinguished by the first certain appearance of pottery in Europe; and by two characteristic stone tools, the *Campignian* or *Nöstvet pick*, and the *Kitchen-midden axe*. The former is a chipped nodule of flint, with straight sides and with a rather blunt point at each end. The latter is a blade with a straight cutting edge between two flat bevelled surfaces, resembling the point of a turnscrew.

The name "Campignian" is derived from that of a hill called *Le Campigny*, near the town of Blangy-sur-Bresle, Seine-Inférieure. Doubt has been thrown upon the claim of the station of Le Campigny itself to belong to the culture called after it: at least, De Morgan infers that the occupation of this site overlapped the full Neolithic period elsewhere, from the fact that he found a polished axe-head, touched up but not re-polished, in one of the ancient hut-foundations.[1] But whatever we may call it—and the established name, "Campignian," is as good as any other—this phase of culture ushers in the Neolithic period, so far as we may judge from the chronology of the remains as yet known. To it belong the famous settlement of Maglemose in the island of Seeland, as well as the remains at Nöstvet and the shell-heaps of the Danish coast;

[1] J. de Morgan, *L'humanité préhistorique* (Paris 1921) p. 84 (English translation p. 79). In his earlier work, *Les premiers civilisations* (Paris 1909) pp. 137-8, he shews no hesitation in accepting the "Mesolithic" or intermediate character of this site.

and it is the civilization of which remains have been found in the gravel deposits on the raised beach at Inbhear Ollarbha.

These deposits will be more fully described in the following chapter; but we may note here that their association with the 25-feet Raised Beach, to which the gravels in question belong, affords us a chronological indication of great importance. This, however, is not altogether easy to interpret, because ancient settlements *of an entirely different type* have been found on Scottish sections of the same beach, at Oban, and on the island of Oronsay.[1] The Irish sites are of the Campignian culture, which has never been found in Scotland; the Scottish sites are of the Azilian culture, which, so far, has not been found in Ireland. Now, the evidence at our disposal would not suggest that the Azilian and the Campignian civilizations were contemporary in Europe. The former is in character a degenerate relic of the Palæolithic culture; and it gives the impression of preceding the latter, which stands in the aurora of the Neolithic culture, by no small space of time. Yet on the 25-feet Raised Beach the two cultures appear to have flourished on the same geological level, in Scotland and in Ireland respectively. It may be that the Azilians of Scotland were an isolated backwater of humanity, among whom belated traditions of an elsewhere moribund phase of civilization still persisted. It is also possible that there were complications in the history of the Raised Beach itself, and that different sections of it are not necessarily of contemporary formation.[2] But in any case the peculiar character of the civilization illustrated by the Irish raised-beach deposits must be taken as indicative—so far as in our present knowledge we are entitled to formulate any conclusions—that the colony which there left its traces did not enter Ireland from the larger island, as we might *a priori* have expected.

The Condition of Ireland at the Beginning of Human Occupation

When the first colony reached Ireland, the country must have possessed a climate considerably moister even than it is now. The surface of the land was covered with forests of oak and pine, interspersed with forbidding swamps. These were

[1] On these settlements see: Joseph Anderson, "Notice of a cave recently discovered at Oban," *Proceedings Soc. Antiqu. Scot.* xxix p. 211: Sir William Turner, "On human and animal remains found in caves at Oban," *ibid.* p. 410: J. Anderson, "Notes on the contents of a small cave or rock-shelter at Druimvargie, Oban, and of three shell-mounds in Oronsay," *ibid.* xxxii p. 298: A. Henderson Bishop, "An Oronsay shell-mound, a Scottish pre-Neolithic site," *ibid.* xlviii p. 52.

[2] On this aspect of the problem see W. B. Wright, "The Azilians of Oban," *Geological Magazine* lxii p. 230.

swollen by the heavy rains, and were drained, but only partially, by rivers of imposing size. The country as a whole was not yet adapted for the cultivation of food plants, so that the interior presented but few attractions to settlers. These might have sailed up the rivers in their canoes had they any reason to do so; but there was really no inducement to take a risk so serious. Accordingly, no traces of the earliest settlers have been found, except on the coast. The Campignians who colonized Ireland, like their kinsfolk who piled up the great shell-heaps of Denmark, were essentially "'long-shore men". Molluscs and fish formed their staple diet, eked out with the flesh of such animals and birds as chanced to be taken in their rudimentary traps. This mode of life long continued in the country: indeed, it might have been seen down to early in the last century in remote parts. A large proportion of the implements of stone and of bronze discovered in the country have been found in the shore-dwellers' sites,[1] notably at Whitepark Bay (Antrim) and Dundrum Bay (Down).

Wild beasts, some of them dangerous, infested the country. The mammoth and the hyæna had probably disappeared; their bones have been found in certain caves,[2] but nowhere in association with remains of the body or of the activities of Man. The reindeer still persisted, though it was already becoming rare. But the bear, the boar, and the wolf were abundant, and the Irish elk—we retain for convenience this popular though not very accurate name—still roamed abroad in considerable numbers.

The last-mentioned was probably the first of the notable fauna of Ireland to disappear after the arrival of Man. Indeed, it was for long disputed whether this animal survived at all into the human period. From the evidence supplied by the peat-bog of Ballybetagh (Dublin), where a very large number of skulls and other remains of the species have been found, it was assigned to interglacial times, and therefore to a time far earlier than any known indication of human occupation of Ireland.[3] But the same volume of *Proceedings* which contains

[1] A list of these shore sites will be found in JRSAI xliv p. 183, but its value is diminished by some carelessness in the references to authorities cited. See further IPCT p. 69. On Whitepark Bay see also JRHAAI xvii p. 104, and PBNFC II vi p. 84. See also Mr. Knowles's reports on the Sandhills of Ireland, appearing serially in PRIA from vol. xvi to vol. xxii. On Dundrum Bay see the same reports, also PBNHFC II vii p. 78.

[2] E. Brenan, "Notice of the occurrence of Mammoth and other animal bones discovered under limestone in a bone cave at Shandon, near Dungarvan, in the county of Waterford," *Natural History Review* October 1859. R. J. Ussher, "On the discovery of Hyæna, Mammoth, and other extinct mammals in a carboniferous cave in Co. Cork," PRIA xxv section B p. 1.

[3] W. Williams, "On an attempt to elucidate the history of the *Cervus megaceros*, commonly called the Irish elk," *Scientific Proceedings Royal Dublin Society*, New Series II p. 105.

the exposition of this theory also contains the first announcement of the discovery of elk-bones, associated with remains of human (Neolithic) occupation, in a cave near Cappagh (Waterford); [1] and this preliminary conclusion was confirmed by the subsequent exploration of the cave, stratum by stratum.[2] The definite evidence thus obtained makes it unnecessary to do more than refer to earlier finds, which had been supposed to point to the same conclusion. We can no longer attach much importance to such vague descriptions as that of a man's body found at a depth of 11 feet in a peat-bog, wrapped in a deer-skin "so large that the observers considered that it belonged to an Irish elk": [3] or the details supplied by Edward Benn as to certain discoveries at Lecale (Down).[4] These last might possibly give chronological evidence of importance, as human bones, accompanied with implements of bronze and even of iron, are there said to have been found in marl-beds at the place mentioned, in association with elk-bones. Unfortunately these particulars are set forth on the evidence of "a gentleman"—"a person of veracity"—"a respectable apothecary"—and other estimable but vague persons, whose imputed qualities, admirable in themselves, do not necessarily imply the possession of skill in comparative anatomy and in the interpretation of archæological evidence. Indeed, the whole communication is valuable only as an object-lesson, by no means superfluous even yet, in how *not* to publish important discoveries, and that is one reason why it has been thought worth while to refer to it.

Not more convincing, in themselves, are scratched elk-bones which have been found in peat-bogs, but which may easily have received their marks from natural causes; or the so-called corrals, reported from Kells (Meath),[5] and presumed at Ballybetagh above-mentioned. The latter place contains a deep bog, in which an extraordinary number of elk-bones have been found. They may have been driven to their doom by packs of wolves: or perhaps they were accidentally mired and drowned, one by one, when drinking. An elk, incautiously

[1] R. J. Ussher and Leith Adams, "Notes on the discovery in Ireland of a bone cave containing remains of the Irish elk, apparently co-existent with Man," *ibid.* p. 231.

[2] See A. Leith Adams, G. H. Kinahan, and R. J. Ussher, "Explorations in the Bone Cave of Ballynamintra, near Cappagh, Co. Waterford," *Scientific Transactions Royal Dublin Society*, New Series, p. 177. See also for another communication by the same authors on the same subject, PRIA xvi p. 73. An abstract of the results will be found set forth in IPCT p. 76.

[3] JKAS i p. 167.

[4] E. Benn, "On the contemporary existence of Man and the *Cervus megaceros hibernicus* or fossil deer of Ireland," JKAS iv p. 155.

[5] S. M. S., "Extinct animals of Ireland," *Gentleman's Magazine* 1834 II p. 147, reprinted in Gentleman's Magazine Library, *Archæology*, part i, p. 6.

stepping into water with a soft muddy bottom, would sink irrecoverably under the weight of his immense horns.

The caves of Edenvale and New Hall, Co. Clare, have yielded bones of the bear, cut and roasted for food, as well as a bear's tooth rudely cut across by human agency:[1] another bear-bone, worked into a pin, was found in the bronze-age burial-carns of Carrowkeel (Sligo).[2] This shews that the bear persisted in Ireland at any rate down to the Bronze Age.

The ancient literature of Ireland makes frequent mention of the chase of the wild boar. Tusks and bones of this animal are among the commonest yields of excavations in ancient sites. It continued in the country at least until the days of Giraldus Cambrensis, that is, to the end of the twelfth century, although by then the breed seems to have become degenerate.[3]

The wolf was the last dangerous wild beast to survive. It is commonly said that the last wolf was killed in the year 1710;[4] but the late Mr. T. J. Westropp told me, shortly before his lamented death, that he had somewhere found a reference to a later occurrence of this animal. He did not at the time give me particulars, and I cannot find that he ever published them. Probably the record has now been lost, in the disastrous destruction of the Dublin Record Office, where Mr. Westropp was for many years an assiduous student.

The First Settlers and the Progress of Colonization

The flint implements found on the 25-feet Raised Beach are as yet the oldest implements known in Ireland, unless the Asturian flints, described in the following chapter, should precede them slightly. If we follow those who would date the Heidelberg jaw, the oldest human relic as yet found in Europe, to somewhere about 382,000 B.C., and the Pilt Down skull, the oldest human relic found in England, to somewhere about 157,000 B.C.—and these dates,[5] though quite tentative, are probably not seriously overstated—we shall at least have formed a conception of the vast stretches of time that have elapsed since Man first made his appearance, on the Continent, and in the neighbouring island respectively. The oldest remains of Man in Ireland can scarcely be dated further back than a modest 7000 years. As at present known, these remains are

[1] R. F. Scharff and others, "Exploration of the Caves of Co. Clare," TRIA xxxiii B p. 1 esp. pp. 18, 19.
[2] PRIA xxix p. 337.
[3] Giraldus Cambrensis, *Topographia Hiberniæ* I xix.
[4] Apparently on the authority of Smith's *History of Kerry* p. 173.
[5] They are adapted from the chronological conclusions set forth on various pages of H. F. Osborn, *Men of the Old Stone Age* (London 1916).

confined to the north-east corner of the island; but perhaps this is merely due to the imperfect exploration of the other regions. It is only in that part of Ireland that flint is to be found in economically sufficient quantities: there alone have the parent chalk cliffs resisted the denudation which elsewhere has destroyed them. In other parts of the country, early Man had to make shift with other materials, some of them very unsuitable; and rude tools made of stones other than flint are not always to be recognised with certainty. No pottery, and no human remains, have as yet been found in association with these primitive objects, even in the north-east of the country.

The flint implements left behind by the first settlers will be described in the following chapter. It is not yet known who these people were, whence they came, and what were their fortunes after they had effected a landing. The absence of human remains from the beach-deposits makes it impossible for us to determine their racial connexion, either with their contemporaries in Europe, or with their successors in the occupation of Ireland. We cannot say whether the fully-developed Neolithic culture was imported by a new immigration, or whether evolution and trade combined to naturalize it among the descendants of the first settlers. Probably both processes were operative; in the present writer's opinion "migrations" are too frequently invoked in contemporary archæological literature to account for the diffusion of culture.

Very few early interments have been discovered in the country; still fewer have been examined and recorded with any approach to scientific accuracy or completeness. This is a serious hindrance to satisfactory generalizations on the early inhabitants of Ireland. Indeed, the time for such generalizations is not yet. Theorists may theorize to their heart's content, untrammelled by a knowledge that has not yet been attained. Ancient remains must be investigated with greater thoroughness than in the past; the modern inhabitants must be studied ethnologically with a completeness as yet unimagined; before prolonged discussions of problems such as these will be anything better than waste of time or of paper. Research is seriously hampered by lack of funds. It is sad to reflect that generous friends of Ireland have poured thousands of pounds into the bottomless coffers of the politics of a transitory moment—sums a small fraction of which would establish an endowment for historical, archæological, or anthropological investigation, the results of which would shed a permanent lustre upon its founder's name, and would be of permanent value to the country.

For the present we can say only this: the earliest remains yielded by excavations in the country, such as they are, indicate that the Neolithic population was, as a whole, of the Mediterranean race; that is, the people of the short, slender build, the long and narrow heads, and the dark complexion, which we find constituting the bulk of the inhabitants of Italy and Spain. But even in Neolithic times this race, as represented in Ireland, was not perfectly pure; other elements were mingled with the main stock. Even before the coming of the "Celtic" conquerors, who introduced the iron culture, there were broad-headed individuals in the country, as the occasional discovery of skulls of this type testifies.[1]

A particularly interesting burial of a brachycephalic individual is described by Dr. T. B. Costello.[2] It occurs in a district where other finds of burials have been made, but it displays marked points of contrast with them. The body was unburnt, and was deposited in a cist constructed of the local limestone, in the very centre of a mound of earth. The body (that of a man) lay in the contracted position, and with it was the skeleton of a young child, not more than five years of age, who must have been buried at the same time. The other interments in the district shew cremation; stone carns as covering, not earthen tumuli; and the stone there used is *not* the local stone, but sandstone, brought from a distance. These points of distinction, taken in connexion with the racial peculiarities of the skull, suggest that this was the burial of some foreigner who had found a footing among the native population, but who was not buried according to the local rites.

The present author, in another place,[3] has tabulated a large number of passages from Irish literature, which point to the conclusion that the earlier inhabitants of the country were dark-complexioned, contrasting, in this respect, with their tall, fair "Celtic" conquerors. The dichotomy between the two races is complete in the ancient literature; we cannot doubt that it was equally complete in the life of which that literature is the mirror. The literature was an aristocratic product, and reflected aristocratic prejudices. Fair persons are held in honour; dark persons are despised. A difference of manners is also indicated by the fact that the dark people crop their hair, while the fair folk wear it long and flowing; an ancient

[1] See IPCT p. 34 ff. for examples: see also R. A. S. Macalister, "A Bronze Age burial near Galbally, Co. Tyrone," PRIA xxxvi p. 150.

[2] T. B. Costello, "A Bronze Age burial in a tumulus in Annachkeen, Headford, Co. Galway," JGAHS xii p. 110.

[3] IPCT p. 42 ff. Further particulars on ancient and modern ethnology, with references, will be found in the same volume, at p. 30 ff.

Celtic bard would have held in the detestation that it so justly merits that contemporary malady of fashion, which is called by the appropriately repulsive name of "shingling"! Such distinctions must have been preserved by restrictions upon intermarriage; the rule of colour is so absolute that we can assert with confidence that any prominent person who violates it is *necessarily* of foreign, or at least of non-Celtic, extraction. Had it been possible to claim the hero Cu-Chulaind as a native "Celtic" brave, he would certainly have been described as fair and tall; the fact that the historians are constrained to call him short and dark—and crop-haired into the bargain [1]—is a strong argument in favour of the historicity of the pugnacious but epileptic Brythonic or Pictish dwarf around whom the wondrous legend of the warrior Cu-Chulaind and his "distortions" has crystallized. It is no answer to this interpretation of the facts to quote the case of Nóisi, the lover of Derdriu, who is described as "black-haired".[2] This proves only, what is obvious from other considerations, that the romance of Nóisi and Derdriu is likewise not a "Celtic" legend at all, but has filtered up from the aborigines to the aristocratic bards, doubtless through slaves attending upon their masters' children, and amusing them by telling them such stories as they knew. Nóisi's dark complexion has had to be preserved, in the interests of the stock folk-tale *motive* of the "three colours" of the raven drinking blood on a snowy day. Derdriu, having seen such a sight, vows never to marry a man save one whose hair should be black as the raven's plumage, whose complexion should be ruddy as the blood, and whose skin should be white as the snow.[3] When she sees Nóisi, who fulfils the conditions, she makes the first advances, true to the instincts of a daughter of a community of the bronze-age folk, among whom society was organized on a basis of mother-right.[4]

[1] *Táin Bó Cúalnge* ed. Windisch line 1380; tr. Dunn p. 78. This neutralizes the "fifty locks of bright yellow hair" with which the same passage credits him, a few lines further back.

[2] This argument is adventured by a writer in JLAS v p. 252.

[3] *Irische Texte*, ed. Windisch, vol. i p. 71. On the "three colours" see MacInnes and Nutt, *Folk and Hero Tales from Argyllshire* (London 1890) p. 431, though it is hardly correct to describe the incident as "Celtic": it is possibly Brythonic, but is much more probably Pictish or pre-Celtic.

[4] Her "proposal" to Nóisi is given in the *Book of Leinster* p. 260, at lines 36 ff., and is printed in Zimmer, "Der kulturgeschichtliche Hintergrund in derErzählungen der alten irischen Heldensage" (*Sitzungsberichte d. Preuss. Akademie* 1911 p. 220). It is expressed in language rather less sophisticated than the admirable sentiments put into this overrated heroine's mouth by modern idealists!

The Later Phases of Prehistoric Ireland

During the Neolithic and the succeeding Bronze Age, the colonists gradually made their way inland from the coasts, and founded settlements in forest-clearances, or on hilltops that were raised above the forest-belt. The forests and the swamps isolated these communities one from the other. Whatever may have been their mutual relations in the country of their origin, in geographical conditions such as these they cannot but have fallen apart, as a number of separate political entities, each governed by its own rulers. But this does not necessarily imply a mutual antagonism, for the following reason. There is every probability that the pre-Celtic Irish were a folk cognate with the Scottish Picts. The latter maintained, down to historic times, the custom of counting genealogical descent, with all that it implies, through the mother. Thus, a king was succeeded, not by his own son, but by his sister's son.[1] The wife's husband was imported from a foreign community, or, at least, from another settlement of the same people, presumably with a different totem ; in other words, a system of exogamy was bound up with the system of mother-right, as is commonly the case among communities socially constituted in this manner. Exogamy created marriage-ties between communities that were otherwise separated. It thus produced a uniformity, which to a large extent neutralized the diversifying influence of isolation. Though we have but few data on which to found our conclusions, it is not likely that there were many serious differences, throughout the country, in language, religion, manners, and customs.[2]

This aboriginal population maintained its ground throughout the Ages of Stone and of Bronze. That it was reinforced by fresh waves of colonization is highly probable ; a gold-yielding country is sure to attract settlers. But these were absorbed in the existing population ; our osteological material is as yet insufficient to enable us to isolate or to identify alien elements. This aspect of the racial affinities of the inhabitants of pre-Celtic Ireland presents one of the numerous questions that still await investigation.

The Celtic Invasion

But the "Celtic" immigration was a very different matter from any such periodic colonizations. It produced a complete revolution in the life of the country. It introduced a

[1] See H. Zimmer, "Das Mutterrecht der Pikten," *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte* xv 277.

[2] For a fuller discussion of this subject see IPCT chapter vii.

new culture, a new language, a new religion, new rulers, a new organization. As we shall see later, it may be dated to some time a little after 400 B.C.

The description of this event, handed down to us by ancient Irish historians, is bound up inextricably with a complicated folk-lore, some of it artificially manipulated, some of it very primitive in character. Reading between the lines, we can see that the landing most probably took place in the south-east corner of the island; it is not unreasonable to conclude that it was the rumour of the gold-fields, in what is now called the county of Wicklow, that attracted the invaders. Even if the auriferous gravels had by this time been almost entirely despoiled of their treasures, thanks to their lavish exploitation during the Bronze Age—as may have been the case—the aborigines possessed a wealth of gold, in the form of ornaments, sufficient to inspire the lust of conquest.

The invaders, we may assume, were few in numbers. But they were equipped with iron weapons, which gave them a heavy military advantage; and the aborigines were themselves broken up into small and scattered communities, unable to make any united or resolute stand against them. Nevertheless, the "Celticization" of Ireland was a very slow process. Some five hundred years later, when the geographer Ptolemy drew up the map which is the oldest contemporary document for Irish history,[1] the communities of coast-dwellers, there enumerated, still for the greater part retained non-Celtic names, with the exception of the peoples established at the south-east corner. From these latter we learn that the invaders were not a single homogeneous army, starting from one centre and arriving at, or about, one time. They include *Brigantes*, who must have been an offshoot from the great people of the same name in the northern part of South Britain; *Cauci* and *Menapii*, who must have come from the sea-coast of what are now Friesland and Belgium, where the same names are to be found. From the point of view of Continental history the fact that the invaders spoke a Celtic language is of no small importance. Had the invasion been delayed till after the operations of Julius Cæsar, other things being equal, they would most probably have imported a Teutonic dialect. Down to the time of Cæsar, Celtic was the speech of culture in Northern Europe. Cæsar, by inaugurating the Romanization of Gaul, dethroned that ancient tongue, and left the way open for the spread of the Romance and the Teutonic languages.

[1] See H. Bradley, "Ptolemy's Geography of the British Isles," *Archæologia* xlviii part ii p. 379: G. H. Orpen, "Ptolemy's Map of Ireland," JRSAI xxiv p. 115.

The invaders did not form a united kingdom of Ireland. To have done so, even if the idea of such an establishment had been familiar to Europeans at the time, would have been a task of unimaginable difficulty. To-day Ireland is a small country. We can travel from side to side in about four hours —less, if we use air transport: we can send a message across the country, and receive an answer, in a space of time limited in brevity only by the human limitations of the telegraph officials. But in the fourth century B.C., and for many a long day after, the country, measured by similar tests, was as large as modern Europe. In the eighteenth century, the posting journey from London to York occupied four days, as we learn from an advertisement of which copies are extant; we in the twentieth century can pass, in the same length of time, from London to Constantinople. Cross-country travel in Ireland was obstructed by thick forests, broad rivers, and dangerous bogs and swamps. But even in the most favourable circumstances, unity and centralization could be the result only of a slow evolution; the subsequent history of Ireland is essentially the history of that evolution, and of the forces, internal and external, that thwarted it.

While we make this admission, we must not forget that there was a strong instinct of unity underlying the inevitable diversity, among the Celtic conquerors; as there had been among the pre-Celtic aborigines. In both Pagan and Christian times there was a community of religion; a community of language; a community of social and of political organization. Ireland was subdivided into separate kingdoms, each with its own local government, and too frequently in hostile mutual relationship: yet from the very beginning of the literature the island was treated as a unit by historians and by hagiographers.[1] In Pagan times there was one strong unifying bond—the periodical Assemblies, not of one province or district alone, but of the whole country, which took place at various important religious centres. At these Assemblies, besides the sacrifices and the other specifically religious rites, laws were promulgated which must necessarily have been binding on all the regions represented in the Assembly; legal cases were tried; and contests, literary and musical, as well as games and trials of skill and of speed were carried on. In their way, these Assemblies must have resembled the Olympic and the other Assemblies of ancient Greece: in fact, we may pause to note that in more than one respect there are parallels between ancient Greece and ancient Ireland. Both were small countries,

[1] See the remarks on this matter in MacNeill, *Phases* p. 245 ff.

occupied by a number of politically independent states. These states were often actually at war one with the other; yet were inspired by an instinct of pan-Hellenism, pan-Ivernism, based upon a community of language and of religion, and fostered by these very Assemblies of the people of the whole country. Both countries attained to an unchallengeable supremacy in art; Greece in architecture and in sculpture, Ireland in metal-work and illumination. But for circumstances which are more fully explained in a later chapter, Ireland might have had great works of literature fit to set beside those of Greece. If the "long-haired Achæans" were really fair-haired invaders from the north, as has been maintained by the late Sir William Ridgeway in his studies on the *Early Age of Greece*, these parallels may possibly be more than mere coincidences. Both countries, to adapt the words of Professor Haverfield,[1] formed "a race whose thoughts and affections and traditions had crystallized into definite coherent form"—a condition which "has in all ages checked Imperial assimilation; it was the decisive hindrance to the full Romanization of the Greek East"; and, in after years, we may add, to the full Anglicization of Ireland.

To describe the Ireland of the Celtic period as an anarchic welter of isolated "tribes," which were always fighting among themselves—a sort of human bear-garden—is simply untrue. Probably as many people might be killed in a modern faction-fight as were killed in any of the "great battles" recorded in the ancient annals. It was an evil way of settling differences; but at least it offered opportunities for an exercise of the virtues of fortitude and of unselfish devotion to a cause. Can we say the same for the methods of modern civilization? The mean and shameless subterfuges of politics; the squalid exposures of the law-courts; the families impoverished by social strife, so that they are forced to sell their heirlooms, nay, their very ancestral houses, to wealthy parvenus overseas; the sordid *mariages de convenance*, with all their unhappy sequels—dare we recall all these and many other like things, and forget the Divine word, *He that is without sin, let* him *cast the first stone?* Through all the mist of legend we can trace a striving after unity, and a consequent instability of the ancient provincial boundaries. The epic tale called the *Kine-reiving of Cúalnge* is, in essence, the story of a raid of the folk of Connacht on the Ulaid (the people who dwelt in part of modern Ulster), and so far may be historic.

The Romans made no direct impression on the country. A provincial king invited Agricola to invade the country, in

[1] *The Romanization of Roman Britain* p. 12.

order to further some interests of his own;[1] and it is possible that Agricola so far accepted as to send a legion on what proved to be a tentative and abortive expedition. Something of the kind seems to be required to explain a reference by Juvenal.[2] But this expedition, if it ever took place, passed away, leaving no sign except, perhaps, a lost coin or two; and Ireland remained outside the empire.

Professor Haverfield has compiled a list of all the Roman objects of which he has found a record as having been discovered in Ireland.[3] He enumerates in all twenty-five discoveries: three may be added, a coin of Probus found at Clones; coins of Diocletian and of Maximian at Gort;[4] and a Roman brooch found at Annesborough, referred to in the following chapter. Of these twenty-eight finds, all but three are coins, singly or in hoards. The largest hoard was that mentioned below, found at Ballinrees; next to it is a collection of about 550 coins of Vespasian and the following emperors, found somewhere near the Giant's Causeway.[5] A bronze brooch from Loughey (Down) is Roman, but of a different type from the Annesborough find; it was associated with a presumed Roman coin, about 152 coloured glass beads, the bowl of a spoon, and some other less important objects.[6] An oculist's stamp from near Clonmel completes the record.[7] A small hoard of ten copper coins (Claudius Gothicus to Constantine II), found at Cuskinny (Cork), was made the subject of some curious speculations, which we can hardly take seriously, as to these objects having been imported to supply material for bronze implements.[8] It must be remarked that of the finds of which particulars have been collected, the majority are badly and (to be quite frank) ignorantly recorded, and the attribution of the coins to their emperors is too uncertain in the majority of cases for much to be based upon it. Haverfield especially notes the total absence of Roman pottery as affording the clearest evidence of a total absence of Romans. It is certainly a most remarkable fact that Samian ware has been found in Britain as far north as the Orkney Islands, but not a scrap of

[1] C. Tacitus, *De Vita et Moribus Agricolae*, xxiv.

[2] Sat. ii 159-60. See Professor R. K. McElderry, "Juvenal in Ireland?" *Classical Quarterly* xvi p. 151.

[3] "Ancient Rome and Ireland," *English Historical Review* xxviii p. 1.

[4] JRSAI lvi pp. 126-7.

[5] Haverfield, *op. cit.* no. 4, and references there.

[6] Haverfield, *loc. cit.* no. 6, and references there; but correct the reference to JKAS, which should read vol. iv (not vol. i) p. 164. Coffey, in describing the Annesborough find, mentions some other brooches in the Petrie collection; but it is not clear that these are of Irish origin (PRIA xxxii p. 174).

[7] Haverfield, *loc. cit.* no. 17, and references there, to which add Wilde, *Catalogue* p. 126.

[8] JCHAS, Series II vol. iv p. 49 ff.

this attractive product of the potter's art has ever been found in Ireland. Haverfield will not admit that there is any reason to take Juvenal's testimony literally.

We hardly reach solid ground, however, until we reach the reign of Cormac mac Airt, the first "personality" in Irish history.[1] According to the annalists he came to the throne in A.D. 227. The agents of the Roman empire were then in full activity in Britain, and Cormac had ample opportunities of becoming acquainted with Roman methods of government, and with the machinery of empire. These methods he ambitiously set himself to imitate in his own kingdom. Down to his time the kingship of Tara had been much more of a religious than of a political nature.[2] He proceeded to develop the latter side at the expense of the former, calling down upon himself, in consequence, if we may believe tradition, the maledictions of the druids. He organized a standing army—a thing till then unheard of in Ireland.[3] So deep was the impression produced by this innovation, that the general entrusted with its organization has dominated the country's folk-lore ever since, in the person of the gigantic Find mac Cumhaill. Following the model of a Roman *basilica*, he built, among other structures, a great assembly-hall at Tara, the foundations of which still remain; it was twice as long as St Patrick's Cathedral in Dublin, the largest church in Ireland.[4]

Notwithstanding these enterprises, Cormac was unable to establish his sovereignty over the whole country. The southern province refused to submit to the empery of himself and his successors. The kings of Munster saw no reason why they should sink their independence in those of Tara; the consequent struggle between the two kingdoms was responsible for much of the fighting that fills the pages of the annals. Notwithstanding, the unifying work of Cormac was continued by his successors; all of whom, save for one interlude, belonged to his line of descent.

His great-great-grandson, Niall by name, dared to oppose himself to the might of Rome. He carried Irish aggression overseas. He raided Scotland, England, and (not improbably) also Gaul. Scholars have identified tangible evidence of these marauding expeditions in the great hoard of 1506 Roman silver coins and other relics, found at Ballinrees, near Coleraine

[1] MacNeill, *Phases*, chapter iv can be profitably read in this connexion.

[2] See my essay *Temair Breg* (PRIA xxxiv p. 231) for the evidence for this.

[3] We may infer this from the account in Keating's *History* (Irish Texts Society edition II 324), taken in connexion with the whole course of Cormac's reign and activities.

[4] See *Temair Breg*, *loc cit.* for a description of these remains.

(Derry), in the year 1854.[1] A very similar find was made in more recent years at Traprain Law, about 20 miles east of Edinburgh, consisting chiefly of fragments of silver vessels, badly maltreated by pirates, in whose eyes they were evidently merely so much bullion.[2] To judge by the coins, the two hoards must be approximately contemporary: and in both Sir William Ridgeway has proposed to see loot carried off from Gaul by Niall and his followers.[3] But a more valuable prize was captured in one of these raids, in the person of a youth of sixteen, who was destined to be the Apostle of the Irish people.

Strange to say, there are people who profess to regret that Ireland never underwent the process of Romanization. This seems to be a fact greatly taken to heart by that unnecessary section of humanity from which proceed the silly letters that are written to the newspapers. They seem to imagine that the dead hand of Julius Cæsar would have been potent to reach across the centuries and to make of the country an earthly paradise for their unimportant selves. Had Ireland been digested in the insatiable maw of the Roman empire, she would have lost much of her interest, most of her charm, and all of her immense importance in the history of European culture.

Christianity in Ireland

Christianity had already been gradually filtering into the country, probably ever since the days of Cormac; but it needed a missionary to organize it. This task fell ultimately to the former captive Patricius, who returned for his great life-work under the reign of Niall's son Loiguire. One of the most important results of the conquest of Ireland by Christianity was a decline in the prestige and the importance of Tara. Notwithstanding a well-known legend, the place was never actually deserted; it remained as a royal residence down to the end of Irish independence.[4] But in spite of the political work of Cormac, the site was important chiefly because it was the home of a king who was believed to be an incarnation of godhead; a large proportion, therefore, of its prestige departed when such a belief ceased to be current. The last of the Assemblies, there periodically convened, took place in A.D. 552.

[1] See an article by R. MacAdam, UJA I ii p. 182 copied (but without the plate of illustrations) in *Numismatic Chronicle* xvii p. 101: Walters, *Catalogue of Silver Plate in the British Museum* p. 52.

[2] They have been reconstructed with marvellous skill and success, and are now among the chief treasures of the National Museum in Edinburgh. See A. O. Curle, *The Treasure of Traprain* (Glasgow 1923), where they are fully illustrated.

[3] Sir W. Ridgeway, "Niall of the Nine Hostages," *Journal of Roman Studies* xiv p. 123.

[4] On this point see MacNeill, *Phases* p. 233 ff.

Monasteries rose on many of the sites of ancient pagan sanctuaries in Ireland: this happened, for example, at the palace of the Ulidian kings, close beside which is Ard Macha, the "Height of [the goddess] Macha". At this sacred spot a temple of the new Faith was founded, and its archbishops entered on the inheritance of the priest-kings of former times. But nothing of the kind happened at Tara to perpetuate its sanctity.

It must be admitted that this cessation of the old Assemblies was a loss. They had borne within themselves the germ of a united kingdom of Ireland: and there was nothing that could exactly take their place in the new system. Nevertheless, learning and art were fostered, and, in the best sense of the word, popularized by the monasteries which sprang up on every side. Above all, the great university—as it is quite fair to call it—of Clonmacnois (Offaly), founded in the year A.D. 548, became a school where scholars not from Ireland only, but from overseas, were educated; and some of whose teachers enjoyed a fame that spread to Britain and to the Continent. Here we may content ourselves with the well-known evidence of Bede, to the effect that many of the youths of England made their way for instruction to Ireland—which Bede could call "a country ever most friendly to England"—and were there liberally received, being supplied gratuitously with victuals and with books.[1]

Most remarkable of all the manifestations of Irish activity during this period was the work of the religious missionaries in various foreign countries. This side of the work of the Church in Ireland began with the year 557, when Colum Cille departed on his mission to Scotland. It continued until the countries now called France, Germany, Switzerland, Austria, and Italy were dotted over with monasteries which owed their origin to the enterprise of Ireland, and to her devotion to her Faith.[2]

The Northmen

The raids of the Northmen once more threw the slowly consolidating country into confusion. Evolution had not yet advanced so far that individual ambition and individual

[1] Bede, *Hist. Eccl.* III xxvii, IV xxiv. See further G. T. Stokes, *Ireland and the Celtic Church* (London 1899) lecture xi. A very full bibliography on this subject will be found in H. Graham, *The Early Irish Monastic Schools* (Dublin 1923).

[2] See J. H. A. Ebrard, *Die iroschottische Missionskirche des* 6, 7, *und* 8 *Jahrhunderts* (Gütersloh 1873): G. T. Stokes, *op. cit.*, lecture vii: M. Stokes, "Early Christian Art in Ireland" (*South Kensington Handbooks*) chapter iii (a convenient brief summary of the subject): Dom Louis Gougaud, *Les chrétientés celtiques* (Paris 1911) chapter v: a valuable work with rich bibliographical documentation throughout.

quarrels could sink in the common weal; but have we reached that millennial stage of development even yet, in any quarter of the globe? The contest of the legitimate king, Mael-Shechlainn II, with his ambitious rival, Brian mac Cinnedig, king of Munster toward the end of the tenth century, added to the prevailing unrest. It was temporarily ended by the abdication of Mael-Shechlainn, which left the way open for Brian to step into the vacant monarchy, with the self-conferred title of "Emperor of the Scots"—that is, of the Irish, for it was not till the following century that the name of "Scotia" was transferred to the country which now monopolizes it. A superficial union of all the kingdoms of Ireland under one ruler was thus at last established; but Brian was by now too old to make any good use of the opportunities for consolidation thus put into his hands; and when he and his house were annihilated, a few years later, in the battle of Clontarf, the affairs of the country were left on the whole in worse disorder than when he began to meddle with them, although the Scandinavian aggressions were stopped for ever. Mael-Shechlainn resumed his throne and reigned for a short while longer; but no one worthy to take his place came after him. There was a succession of a few poor ghost-kings; and then came the inevitable end.

Geographical History of Ireland

The history of Ireland, of which in the foregoing paragraphs we have given the shortest of summaries, is crystallized in her geography. The territorial divisions, great and small, are monuments of the successive occupations of the country. They are as follows:—

1. Provinces, four in number, but formerly five. Most probably this division is the oldest of all, at least fundamentally; during the historic period the boundaries between the provinces fluctuated from time to time, and even the number "five" was not constantly maintained. But however the delimitation may have been artificially modified by conquest or by other causes, it ultimately rests upon the unchangeable physical lines of water-courses. These were the barriers set by Nature between man and man in Ireland: divisions depending upon them may well be as old as the earliest occupations of the country. The names given to the four modern provinces are corruptions of the names of the chief peoples inhabiting them, with in three cases a corruption of the Old Norse word *stáðr*, "a steading," tacked on to it.

2. Counties, of which there are thirty-two, most of them called by the Anglicized corruption of the name of the chief

town: but in some cases by the corruption of the name of a territory wholly or partly included within the county area. In the former case, the name of the county is properly 'The County *of* "Dublin"' or "Kilkenny," or whatever it may be; but it is not strictly correct to speak of 'the county of "Fermanach,"' or 'of "Tyrone,"' for there are no towns of these names. The former of these two is called after a small territory which occupies a part of it. The latter is named from a large territory, to which it is a comparatively late addition; of which it forms only a small part; and in which it is not entirely contained. Two counties were formerly labelled with comparatively modern names, "Queen's" and "King's" Counties, in honour of Queen Mary Tudor and Philip II of Spain. These names have now been officially discarded in favour of the immeasurably more ancient territorial appellations Laighis [Leix, pronounced Leesh], and Uí Failghe [Offaly].

This county division, now the most conspicuous of all, upon which the entire administrative machinery of the country is based, is by far the most recent. It begins with the shiring of north-east Ulster under king John, and was not completed until the lands of Uí Briúin and Uí Tuathail were shired, under the name of County Wicklow, in the reign of James I.[1] The purpose of this county division was to facilitate the government of the country by English officials, who naturally could use with the greater ease the methods which had been evolved among their own people.

3. DIOCESES, likewise thirty-two in number, but not conterminous with the county divisions: the number varies at different times. These take us back to Celtic times. Subordinate to the kings of provinces, in the old Celtic polity, were kings of *tuath*-groups. A *tuath* (plural *tuatha*) was the political unit of the Celtic state; a community of people, not necessarily united by ties of blood (and, therefore, *not* to be called "a tribe," which is *always* a misnomer, WHEREVER used, in reference to Celtic Ireland)[2] and ruled by a governing family which gives its name to the whole community. A number of *tuatha* allied together formed what we may call a *tuath*-group; these

[1] See C. L. Falkiner, "The Counties of Ireland; an historical sketch of their origin, constitution, and gradual delimitation," PRIA xxiv p. 169. (It may be of use to the non-Irish reader to mention that territorial names like Uí Failghe, Uí Briúin and the like are primarily those of the ruling families of the regions which bear these names. *Uí* is the plural of *Ua*, "grandson," and signifies "descendants of" so-and-so. *Ua* is sometimes written *ó*, and in modern times becomes an absurd "O'", the mark of prolongation becoming an apostrophe as though something had been omitted: and then, by a popular analogy, the other patronymic prefix, *mac*, "son" is sometimes written "M'". The plural Uí is sometimes written in English books "Hy" and then, of course, assumes the false pronunciation "high". The proper pronunciation is something like English "ee".)

[2] On this important matter see MacNeill, *Celtic Ireland*, chapters ix, x.

unions of *tuatha* are at the basis of the primary ecclesiastical divisions of the country.

4. BARONIES, of which there are three hundred and fifteen, grouped together to form the counties. These baronies are the lands of the ancient *tuatha*, and their modern names are for the greater part corruptions of the name of the ancient ruling family. But the generic name "barony" recalls the confiscation of these ancient territories, and their subjection to the sway of a feudal *baron*, after the Anglo-Norman invasion.

5. PARISHES, which again are of Celtic origin. The parish boundaries were primarily those of the areas administered by the ancient monasteries. Usually their boundaries are based on those of the lands of some ancient landowner under whose auspices and protection the monastery was first founded; though no doubt ecclesiastical convenience and other causes have led to many modifications in the parochial divisions in the course of time.

6. TOWNLANDS, the smallest areas into which the map of Ireland is divided.[1] There is a great number of these, and they are of very unequal size; their names are, as a rule, corruptions of simple descriptive terms. They correspond to the ancient household steading-lands. Much local history can be gleaned from an intelligent study of townland and field boundaries. For example, the unexpected and apparently meaningless deflection of a road or a mearing-wall (as boundary-walls are called in Ireland) is often the sole record of some otherwise vanished fortress or homestead. On this account the early edition of the Ordnance Map is of great historical importance, as the field-boundaries there marked are clearly traditional. In many cases these have been readjusted in more recent years by the process technically known as "striping," and the new edition of the map naturally shews the mechanical parallel lines which have thereby taken the place of the old irregular divisions.

THE LITERARY HISTORY OF IRELAND

The literary history of Ireland is a subject upon which we need do no more than glance in this present study. The old native historians have preserved for us strange stories of the peopling of Ireland by successive bodies of immigrants.[2] They tell us of the lady Cesair and her followers, who arrived forty days before the universal deluge: of successive leaders called

[1] On these see W. Reeves, "On the townland distribution of Ireland," PRIA vii p. 473.
[2] A summary of these will be found in IPCT p. 26 ff.

respectively Partholón and Nemed, who came afterwards; of Fir Bolg, of Tuatha Dé Danann, and finally of the sons of Míl, that is, the Celtic people. It is possible that the bare outline of these tales is founded on the actual facts. Passing over the antediluvian stories—of which the Cesair legend is only one of several—we may perhaps identify the people of Partholón, those of Nemed, and the Fir Bolg as various traditions of the aboriginal bronze-age people; the sons of Míl as the Celtic people; and the Tuatha Dé Danann, who were certainly supernatural beings, as the gods whom the Celts brought with them. But we can go no further. The incidents related of these successive immigrations are mostly incredible, and to a great extent belong to the world's general stock of folk-lore; they are open to more than a suspicion of having been worked over by the historians who have transmitted them to us; and they have certainly been fitted, by Procrustean processes, into an artificial chronological framework constructed from an uncritical study of Biblical *data* and of the chronicles of Eusebius.[1] It must be said quite plainly—for this is a matter on which there seems to be some misapprehension—that the study of ancient Irish literature does not give any very great help toward the study of Irish archæology. The exact reverse is the case: the Irish literary scholar needs all the help that he can obtain from the archæologist who is trained in the schools of modern Europe. To assign specific types of weapons, etc., to the "Fir Bolg" or the "Tuatha Dé Danann" is simply to talk unmeaning nonsense.

As for the history of the later Celtic period—a narrative which, in the main, is authentic—all that is necessary for the reader of the present work is a series of pigeon-hole compartments, such as has been supplied in the preceding pages; into these the facts to be set forth in the following chapters can be fitted.[2]

Let it not be supposed that this is in any way intended to disparage the study of ancient Irish Literature, or ancient Irish History. Quite the contrary. In Ireland these two, with Archæology, make a triple sisterhood of sciences, co-equal in importance, but independent each of the other to a degree perhaps unparalleled in any other country. Each of the three demands her own votaries; each of the three has a contribution to make to the perfect picture, such as neither of the other two can supply.

[1] On this subject see MacNeill, *Phases*, chapter iii.

[2] For fuller details reference may be made to Arthur úa Cleirigh, *The History of Ireland to the coming of Henry II* (London n.d.): Eoin MacNeill, *Phases of Irish History* (Dublin 1919): the relevant chapters of the most useful *A Short History of the Irish People*, by Mary Hayden and George A. Moonan (Dublin 1921): Alice Stopford Green, *History of the Irish State to* 1014 (London 1925).

CHAPTER II

THE AGES OF STONE AND OF BRONZE

PRELIMINARY REMARKS

THE heading of this chapter will perhaps surprise the reader. He will feel moved to ask why these two Ages should not be treated separately. The answer is, On account of the increasing difficulty of doing so. A hundred years ago a hard-and-fast line could be drawn between the Ages of Stone and Bronze. A simple rule of thumb was sufficient; if an object was of flint it was of the Stone Age, if of bronze it was of the Bronze Age. But the line is rapidly becoming effaced, not only in Ireland, but in all the countries of Europe. We now know that the use of flint and of other stones, for the manufacture of tools, continued until long after the metallurgy of copper and bronze had been introduced. Indeed, this might have been expected from the first; metal must always have been expensive, and the poorer folk, who could not afford it, must have continued to make shift with the older and cheaper material. Both in Ireland and elsewhere, flint and metal objects are sometimes to be found in an association so close as necessarily to imply contemporaneity. It follows that even if there should not happen to be any metal in a deposit, we cannot assume, as a matter of course, that the deposit is Neolithic; for the absence of metal may be a mere chance. It does not prove that the use of metal was unknown when the deposit was made, any more than a pocket full of halfpence proves that its owner is ignorant of the use of silver coins. In Ireland, where there is no native tin, and where, in consequence, bronze must always have been costly, such a chance is especially likely to happen; even the wealthy would there hesitate before they wasted this precious material upon irrecoverable funerary and similar deposits. Indeed, flint implements have been found even in late Iron Age and mediæval lake-dwellings.[1] This fact has been used to throw discredit

[1] For a single instance among many, see S. A. d'Arcy, "Excavation of two lake-dwellings near Clones," JRSAI xxx p. 204, especially p. 205 ff.

on the chronological system of the "Three Ages," the foundation-stone of modern Archæology.[1]

Objects which, so recently as the nineties of the last century, would have been confidently labelled "Neolithic," are now known, by the evidence of associated finds, to be of the Bronze Age. In short, early Prehistoric chronology is in the melting-pot at the moment when we happen to be writing, and a certain vagueness must be the penalty of living and working in such a time of transition.

The history of the Stone Age in Ireland is complicated by the capricious distribution of flint in the country. There is only one place where the chalk cliffs (in which flint is found in Nature) have survived erosion; this is the north and north-east of the County of Antrim, where a period of volcanic activity spread a thick bed of basalt over the chalk before it had wholly yielded to destructive influences. Visitors to Portrush are familiar with the great basalt-crowned chalk cliffs which there line the coast, and with the fantastic forms into which they have been carved by the sea. It is in such cliffs that flint nodules are found, laid in regular layers or "floors". As the chalk yields to erosion, the nodules in the exposed edges drop out to the foot of the cliff, where, one by one, they accumulate. There is a stratum of flint nodules between the upper surface of the chalk and the basalt covering; these are the relics of floors of flint, once embedded in higher parts of the cliff—parts that had already disappeared before the volcanic outbursts spread a protecting cover over the rest.

Thanks to these cliffs, the supply of flint in the north-east of Ireland was inexhaustible, and was easily exploited. It was not necessary to drive great mine-shafts into the chalk-beds in search of the material, as was done in England, at Brandon and Cissbury. In Antrim, the nodules were to be had for the picking up. In other parts of the country the chalk beds have entirely disappeared,[2] and though flint nodules survive from these vanished cliffs, the supply was too capricious to be of commercial value; indeed, most of the deposits are now submarine and inaccessible. As we advance southward from the Antrim region the amount of flint, worked or unworked, diminishes rapidly. Other stones, some of them very unsuitable, are pressed into the service. Waste cores disappear altogether; the superiority of flint to all other stones is recognized, and the possessor of a fragment thereof, whose lot is cast in one of the

[1] As, for example, by G. Morant, describing a heterogeneous collection of objects found in a lake-dwelling near Carrickmacross (Monachan), JKAS ix p.8.

[2] A fact incidentally set forth by G. A. J. Cole, in his paper on "The Problem of the Liffey Valley," PRIA xxx B, at p. 12.

less favoured regions, uses it down to the very last available flake.

Pre-Neolithic Man

The possibility of Palæolithic, or even of Pre-Palæolithic, Man being some day discovered in Ireland is not to be denied; but the evidence that has accumulated down to the present time is completely negative in character.

There is no dearth of reports of the finding of traces of these early periods; but in every case the observations on which they have been based have proved to be faulty. The implements described as Palæolithic have been found to be Neolithic when submitted to closer examination. In some cases they have proved to be merely products of the accidental fracture of flint nodules, and not humanly made implements at all. Until much further scientific exploration has been carried out, especially in the many caves which the country contains, we must be content to leave the record of Palæolithic Man in Ireland an absolute blank, notwithstanding the publications named in the footnote below,[1] and others to which it is not worth while to refer.

The Earliest Inhabitants

1. *The Campignian Deposits*

The remains of the earliest inhabitants of Ireland, so far as they are at present known, fall into two series: the Campignian and the Asturian.

The Campignian deposits are intimately connected with the 25-feet Raised Beach, the remains of which have been exhaustively studied in their geological aspect by Dr. R. Ll. Praeger, and in their archæological aspect by the late George Coffey.[2] Dr. Praeger has traced the line of the beach round the north-east corner of Ireland, from Inbhear Ollarbha (Antrim) to Co. Donegal; and in the paper quoted he indicates the places where the chief evidences of its existence are to be found, and the nature of those evidences. The best-known, and from the archæological point of view the most important,

[1] E. F. J. Bennett, "Eoliths in Belfast and Bloomsbury," *Geological Magazine*, New Series, decade IV, vol. x p. 127: W. J. Knowles, "Flint Flakes in the glacial gravels of Ballyrudder, near Larne, County Antrim," BNFC II iii 410 (see the unfavourable report on these flints in the same volume, p. 518): Rev. F. Smith, *The Stone Ages in North Britain and Ireland* (London 1919): W. J. Knowles, "The antiquity of Man in Ireland; being an account of the older series of Irish flint implements," JAI xliv p. 83.

[2] G. Coffey and R. Ll. Praeger, "The Antrim Raised Beach; a contribution to the Neolithic History of Ireland," PRIA xxv p. 143. This paper contains full references to earlier literature on the same and cognate subjects.

is the strip of gravel bank known, from its sickle-like shape, as *Corrán* (sickle) which juts into Inbhear Ollarbha; we may quote from the paper mentioned the following description :—

"It is a long tapering ridge, heaped up by tides, extending from the narrow entrance of 'Larne Lough' for some three-quarters of a mile into the waters of the bay. The material of which it is composed is stratified gravel, with sandy beds; the latter often exhibit colonies of burrowing bivalve shells, still in the position in which they lived. All the layers yield abundant specimens of the commoner univalve shells, which crawl about between tides and in shallow water. With these shells flints worked by man are found."

The relation between the distribution of the flints and the stratification of the gravels was investigated by a special committee of the Belfast Naturalists' Field Club; the general result was that the worked flints were commoner in the upper strata, rarer, though not unknown, in the lower strata, and were on the whole absent from the interspersed layers of sand. The humanly-wrought objects extended through the gravels to a total vertical depth of about 19 feet.[1]

As we have already seen in the preceding chapter, this 25-feet Raised Beach is evidence for a post-glacial submergence of the land. Beds of estuarine clay were laid down in Loch Laoigh (Antrim), contemporaneously with its formation, and resting on an old surface of boulder-clay 28 or 30 feet beneath the present land surface. Remains of animals such as the Irish elk and the wild boar are found upon this boulder-clay surface, but no traces of Man. When it became submerged, the outflowing river deposited the silted clay which now covers it. So far as it goes, the evidence is thus against the human occupation of Ireland during the maximum emergence that preceded the formation of the 25-feet Raised Beach.

For the complex geological details brought together by Coffey and Praeger, reference must be made to their paper, quoted above. They identify five stages in the history of the land-oscillations involved; these, in tabular form, are as follows :—

1. A land-surface of boulder-clay, acted upon by aerial denudation.
2. Formation of peat upon this surface.
3. Submergence to a depth of 25 feet below the present level, and formation of the beaches and the beds of estuarine clay. *First appearance of traces of Man.*
4. The land raised to a comparatively small height above present level.
5. Submergence to present level.

[1] "Report of a Committee of Investigation on the gravels and associated beds of the Curran at Larne," PBNFC Series II vol. iii p. 198. See also a previous report in vol. ii p. 519.

They further adduce some evidence for dating these movements. The same series has been observed on the Lancashire coast, and Roman remains have been found associated with the traces of the *fifth* stage.[1] In the Isle of Man there is a raised beach at a height of 10 to 12 feet above the sea; and where this is broad it has numerous Neolithic flints *on its landward side*. The obvious inference is that the beach was partly above high-water mark during Neolithic times; and being less elevated it is presumably of later date than the 25-feet Beach.[2] On the other hand, the superposition of the geological level to the boulder-clay shews that the deposits are post-glacial, and disposes of all attempts to push its flints back into the Palæolithic period. Among other arguments that have been advanced in favour of this earlier date, have been the discoveries of a mammoth-tooth in similar gravels at Ballyrudder (Antrim), and of an elephant-bone, said to have been found at Inbhear Ollarbha itself.[3] These bones, however, do not appear to have been naturally bedded, and there is no proof that they and the tools were contemporary. "No significance," says Coffey, "can be attached to these remains as regards the age of the gravels; they must be regarded as derived from an older formation." Mr. Reginald Smith has used the Raised Beach flints of Ireland as a support, in his attempt to assign the flint mines of Brandon and Cissbury to the Aurignacian stage of the Palæolithic period.[4] Speaking for myself, I find it very difficult indeed to see any justification for the main thesis: and the implements figured in the excellent illustrations accompanying the paper in *Archæologia*, and claimed to be Aurignacian, seem to me to be some Campignian, one Asturian, and the rest as Neolithic as they well can be. The two photographic illustrations given on the same plate,[5] representing flints from Cissbury and from the north of Ireland respectively, are chiefly useful for pointing a contrast. The principal tool in the latter group is a good typical Campignian pick. The others are less characteristic, and might be rude Neolithic tools, but do not resemble the products of any phase of the Palæolithic period. Other at-

[1] T. M. Reade in *Proceedings of the Geological Society of London*, quoted by Coffey and Praeger, *op. cit.*

[2] G. W. Lamplugh, *Geology of the Isle of Man* (1903) p. 402, quoted by Coffey and Praeger, *op. cit.*

[3] W. J. Knowles, "Report on Flint Implements of the North-east of Ireland," PRIA xvii p. 188. See strictures by W. Gray, PBNFC Series II vol. ii p. 287.

[4] R. A. Smith, "Un facies aurignacien en Angleterre," *Congrès internationale d'Anthropologie et d'Archéologie préhistorique*, Geneva meeting (1912) i 414: "On the date of Grime's Graves and Cissbury Flint Mines," *Archæologia* lxiii p. 109.

[5] *Archæologia loc. cit.* plate xxii facing p. 128.

tempts that have been made to trace Palæolithic forms in Irish Neolithic flints must be considered as equally unsuccessful.[1]

A relatively earlier deposit of flints, in submerged peat at Portrush, is reported by Mr. W. H. Patterson : [2] but the artificial nature of these flints seem to need confirmation, and they still await an adequately illustrated description.

The careful archæological report of Coffey on the Inbhear Ollarbha site, which forms the second part of the classic paper from which we have quoted, is unfortunately weakened by the author's failure to recognize the true archæological *facies* of the flints. This cannot be imputed to him for blame. The deposits of Le Campigny had only recently begun to attract the attention of scholars when the investigation of the beds was made ; the identification of the Campignian culture as a phase intermediate between the Palæolithic and the Neolithic was still buried in the pages of a few scientific journals of the Continent. No fault can therefore be found with an investigator who was not in the possession of knowledge scarcely available at the time when he was making his researches ; but none the less it is a misfortune which vitiates his conclusions. Coffey considered that the flints found at this site were of the fully-developed Neolithic period, and were comparable with the remains of Neolithic culture to be found elsewhere in Ireland. Their roughness he explained as being due to their imperfection of finish. He did not accept the site as being a dwelling-place ; he considered it to have been merely a station, where flint-workers came and roughed out their flints, which they carried away to be finished and polished elsewhere. The "Larne celt" so-called, he regarded as being nothing more than the raw material from which a "Neolithic celt" was intended to be made.

This theory is no longer tenable. The discoveries at Nöstvet and elsewhere have shewn us where the Inbhear Ollarbha series must be placed in the culture of Europe. They are not Neolithic ; they are Protoneolithic. The "Larne celt" is identical in type with the Campignian pick. The *tranchet* or "kitchen-midden axe," associated in Continental deposits with the Campignian pick, is also found in the gravels of Inbhear Ollarbha, although in relatively small quantities. Specimens of this type of tool have also been found at Portrush, in an analogous deposit.[3] On the other hand, no pottery has been

[1] See, for example, W. J. Knowles, "Survivals from the Palæolithic Age among Irish Neolithic implements," JRSAI xxvii 1.

[2] See notes in JRSAI xxvi p. 383 and in PBNHPS 1896-97 p. 32.

[3] W. J. Simpson, "On worked flints found on a raised beach at Portrush," PRIA xviii p. 71, to be read in connexion with Mr. Knowles's report at p. 177 of the same volume. See further W. J. Knowles, "Irish stone axes and chisels," JRSAI xxiii p. 141.

found in any of the Irish Campignian sites, although pottery is an invariable concomitant of the Campignian culture on the Continent.[1]

Oportet operari donec dies est is or should be the rule of life of the practical archæologist. Much of the evidence for the early colonization of Ireland, afforded by the Raised Beach, is no longer available. At the type station, extensive railway works have made a clean sweep of a large portion of the gravels. Elsewhere the houses and villas of popular watering-places sprawl over important deposits. *Nox quando nemo potest operari* has, even now, begun to fall.

The following is a list of the types of flint implements found on the Raised Beach sites: they are very fully illustrated in Coffey and Praeger, *op. cit.*:—

1. *Cores.*—These are more or less globular or cylindrical in shape, measuring up to about 3 inches or a little more in maximum diameter. Although the Belfast Naturalists' Field Club, in their investigation of the site, happened to find but few of these objects,[2] they are not uncommon. Mr. Coffey says of them that "they are generally coarse and defective, as if discarded after a few trial flakes. . . . The good pieces were probably worked out, and fine cores are very rare, but the characteristic core-form of those which can still be collected in large numbers is unmistakable, though they probably should be looked on as wasters for the most part rather than serviceable cores."[3]

2. *Flakes.*—The flakes found in the Inbhear Ollarbha site fall, speaking generally, into two classes. The first are rough, wedge-shaped splinters of flint; a noticeably large number of them have the bulb of percussion at the narrower end. The second are much more delicate in form, and were evidently intended to serve as knives. The edges shew signs of wear, but it is doubtful whether they have indications of intentional secondary chipping. The flakes of the first class often have some of the outer calcareous shell of the parent nodule adhering to them, and Coffey considers that these are mere wastes, struck off and thrown away in the process of shaping another implement.

3. *The Campignian Pick* (Fig. 1 *a*)—This object, called by local collectors the "Larne celt," is a cylindrical bar of flint, about 4 to 6 inches in length, covered with coarse surface chipping. I have somewhere seen a parallel drawn between this technique

[1] Simpson (*op. cit.*) speaks of small fragments of pottery being found at Portrush, but these were apparently at a higher level than the characteristic flints.
[2] See the report in their *Proceedings*, Series II vol. iii at p. 204.
[3] Coffey and Praeger, *op. cit.* p. 173.

and the delicate surface chipping of Solutrean javelin-heads, but such a comparison is quite inept. Coffey[1] has given a long list of raised beach sites in Ireland, where objects of this type have been found. The Campignian pick has no cutting edge, nor has it a sharp point at either end; this tool is rare in Great Britain.

In the normal Campignian pick the cross-section of the tool is more or less circular, or else is a roughly equilateral triangle. There is, however, a variety which is a flattened oval, with moderately sharp edges running down the sides. Cissbury has yielded many examples of a type of tool resembling this form, but on the whole they are more sharply pointed than the Inbhear Ollarbha examples.[2]

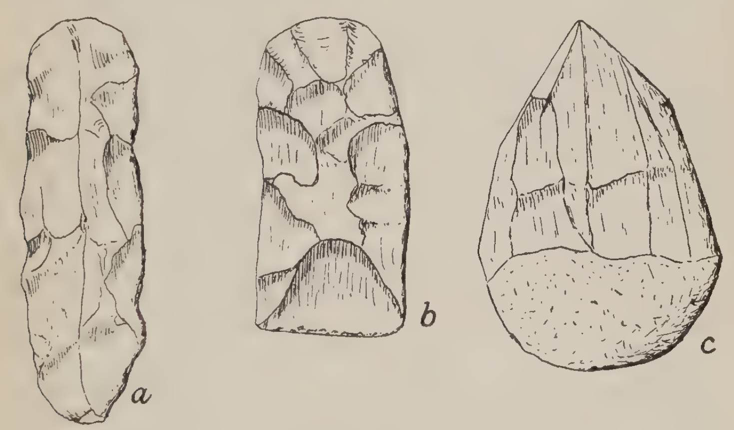


FIG. 1.—The older forms of flint implements.

4. *Chisel-axes,* or *Kitchen-midden Axes* (Fig. 1 *b*).—These are wedge-shaped flakes with an edge formed of two bevelled facets, like the edge of a turnscrew. This form is comparatively rare in Ireland, though sporadically found in various places.[3] The type is also known in South Britain; Evans figures one from Thetford.[4] But it is noteworthy that practically all the implements found in South Britain, which display any analogy with the Irish raised-beach types, are from regions remote, comparatively speaking, from Ireland; and that there is no indication of a concentrated Campignian population in Great

[1] *Op. cit.* p. 184. For further literature on the subject see Knowles's paper on "Irish stone axes and chisels," quoted above.

[2] See R. A. Smith's paper in *Archæologia*, quoted above, plates xxiii, xxiv.

[3] Coffey and Praeger, *op. cit.* p. 187; also references already given above, and W. J. Knowles, "Prehistoric stone implements from the river Bann and Lough Neagh," PRIA xxx p. 195, esp. p. 206. See also PRIA xvii, plate facing p. 186 upper figures (reproduced IPCT p. 85).

[4] Sir J. Evans, *Ancient Stone Implements of Great Britain*, p. 69 Fig. 14.

Britain, as there is in Ireland. So far as the evidence has been collected as yet, it is in favour of an independent colonization of Ireland from some Continental source. The pick found at Pencaer, Pembrokeshire, is just as likely to have been the property of an Irish wanderer in Wales, as of an emigrant setting forth from Wales to Ireland.

Not only by their forms are the raised-beach flints distinguished from Irish flints of later date. They are especially characterized by the white, china-like patina, called by the archæologists of the Continent *cacholong*. This is especially the case in flints from the upper strata of the beach-deposits; those in the lower strata are less thickly covered with the patina, and moreover are less abraded on the edges.[1]

The Asturian Flints

The Asturian culture is a post-Azilian phase of civilization, first brought to scientific notice by Professor Obermaier of Madrid,[2] on the basis of excavations conducted by Count de la Vega del Sella in certain caves and rock-shelters of Oviedo. This culture displays an extremely poor variety of implements, the chief tool being a nodule of flint or of quartzite, brought at one end by chipping to a point—resembling that of a gigantic lead-pencil very inartistically cut—the other end being as a rule left untouched (Fig. 1 *c*). Some examples of Asturian flints of this kind were identified by Dr. Walther Bremer among certain flint implements from Island Magee (Antrim) in the Royal Irish Academy's collection, soon after his appointment to its keepership; unfortunately, his untimely death prevented him from putting in permanent form the announcement of the discovery which he made verbally at a meeting of the Academy.[3] Earlier than this, another specimen in the British Museum had been published, but its analogies were not recognized.[4]

It is as yet too early for us to understand the bearing of

[1] Coffey, *op. cit.* p. 176. On the general subject of the Raised Beach, reference may be further made to W. Gray, "The antiquarian aspect of the Co. Antrim Raised Beach," JRSAI xxi p. 388: W. J. Knowles, "Flint Implements from the Raised Beach at Larne and other parts of the north-east coast of Ireland," PRIA xvi p. 209; also xvi p. 436: *Idem*, "The worked Flints from the Raised Beach at Larne and elsewhere in the north of Ireland," PBNFC Series II vol. ii p. 539: R. Ll. Praeger, "Report upon the raised beaches of the north-east of Ireland, with special reference to their fauna," PRIA xx p. 30: N. F. Layard, "The older series of Irish Flint Implements," *Man* ix no. 54.

[2] H. Obermaier, *El Hombre fósil* (Madrid 1916) p. 334: Conde de la Vega del Sella, *El Asturiense* (Madrid 1923): Obermaier, "Asturias-Stufe" in Ebert's *Reallexikon der Vorgeschichte* (Berlin 1924).

[3] It is referred to in his paper, "Die Stellung Irlands in der Europäischen Vor- und Frühgeschichte" (*Festschrift zur Feier des 75-jährige Bestehung des . . . Museums zu Mainz*, 1927) p. 2.

[4] In *Archæologia*, vol. lxiii plate xxii Fig. 8.

this discovery upon the early peopling of Ireland: but it certainly testifies to a Spanish element mingling with the immigrants who introduced the Campignian culture.

The Later Stone Implements of Ireland

1. *Chipped Flint*

Twenty-five or thirty years ago, this section would have been headed "Neolithic Implements"; but a caption so uncompromising is no longer admissible. Flint implements continued to be manufactured, with remarkably little modification in type, down to the Iron Age. The chronological classification of flint implements is far less certain now, than it appeared to be in the past generation: it must be borne in mind, in reading the following descriptions, that while some of the objects referred to may be of the pure Neolithic period—that is to say, not later than about 2500 B.C.—many, if not most, of them must be assigned to times less remote.

We may divide stone implements broadly into two classes, *chipped* and *polished*: but these cannot be rigidly separated one from the other. As a rule the chipped implements are in flint or chert; the other siliceous material sometimes used elsewhere, obsidian, was unobtainable in Ireland, and therefore is never found. But attempts were sometimes made, with limited success, to manufacture chipped tools in non-siliceous stones. Polished implements, which are as a rule made of fine-grained homogeneous stones, usually one or other of the marbles or the basalts, are chipped to shape before receiving their final polish. There are some transitional types, in which the polish is only partial, being confined to the cutting edge.

The Irish craftsmen attained to a high degree of skill in working flint. Although they could not challenge comparison with the best of the Neolithic Egyptian or the Scandinavian flint-workers, their products are of no mean order of excellence, and it is frequently possible to infer from the result that the artificer was inspired, by a nodule of pleasing colour, to put forth every endeavour to produce a real work of art. The care lavished upon the manufacture of arrow-heads is especially noteworthy, considering the ephemeral nature of those weapons; for there was every chance that such missiles, once shot away, would never be recovered.

The following are the types of flint implements found in Ireland:—

1. *Cores* (Fig. 2 *a*).—These are merely the wastes, which remain after the serviceable flakes have been struck off from

the nodule. They may be of any shape and size.[1] As flint is obtainable in large quantities only in the north-east corner of

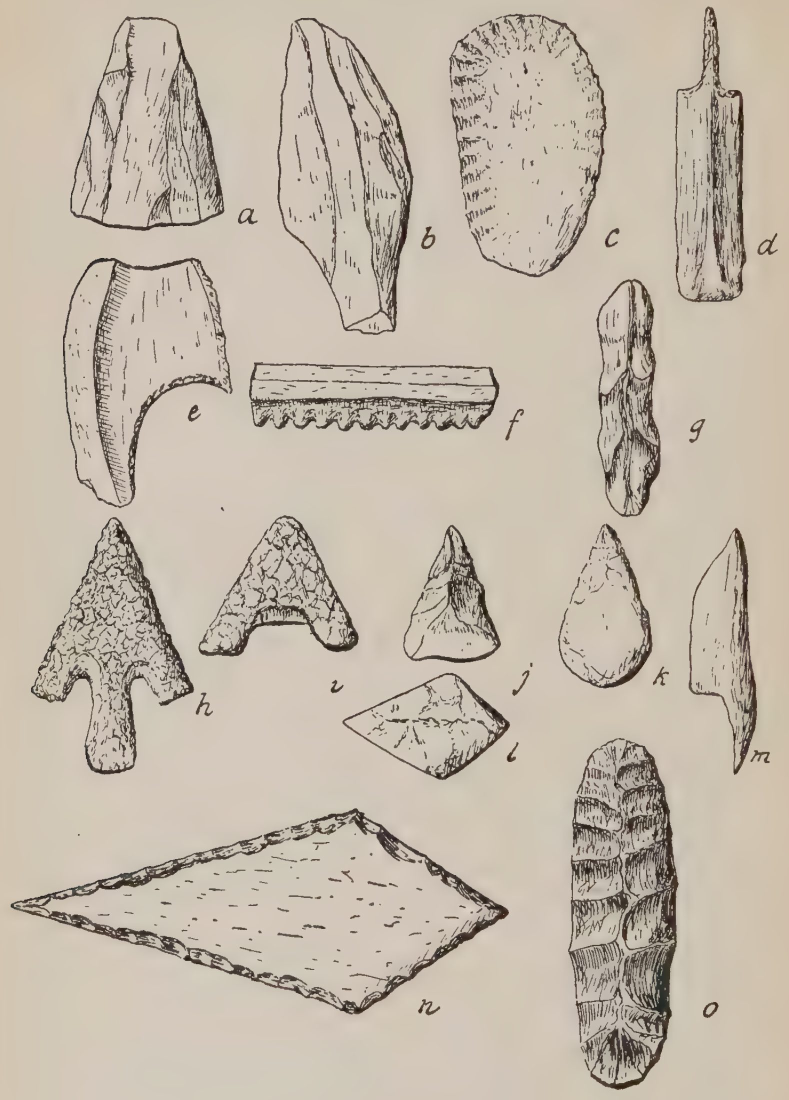


FIG. 2.—Types of later flints.

the country, it is there alone that cores are to be found. Elsewhere, the material was too valuable to waste, and was used to the last flake.

[1] See illustrations in Wilde, *Catalogue* p. 8 (Copied in Wood-Martin, *Pagan Ireland* p. 373 and in IPCT p. 86): PRIA xxx plate xvi nos. 93-96.

2. *Flakes* (Fig. 2 *b*), which are to be found in abundance, and which were used for whatever purpose their shape suggested. Knives, scrapers, borers, javelin-heads, are all varieties of flakes: and many flakes could be used for several of these purposes, according to the nature of the handle in which it was mounted. One flint flake, found in the river Bann, and now in the Royal Irish Academy's collection, still retains a wad of moss, which has been wrapped around one end to serve as a handle (Fig. 3).[1]

3. *Scrapers* (Fig. 2 *c*).—Flakes which have been touched up with secondary chipping along one or both edges, or at the end, in order to make them suitable for such a purpose as scraping clean the inside surfaces of the hides of slaughtered beasts, etc. There is a large variety of shapes of scrapers, and elaborate classifications of them have been made, which, however, are of very little archæological value. Classification of objects of this kind, *for its own sake*, is merely an entertaining but



FIG. 3.—Flake-knife with moss handle.

useless pastime; it is valuable only if chronological or other facts are to be learned from it.[2] At most a classification into "side-scrapers" and "end-scrapers" is necessary, according to the position on the flake of the scraping edge; although a special name might be kept for a few eccentric forms, such as the "spoon-scraper" figured by Wilde.[3]

Scrapers are not reported so frequently as their common

[1] For a remarkably similar object from South Australia see JRHAAI xv p. 118. The paper in which this illustration is found (W. Gray, "The character and distribution of the rudely worked flints of the North of Ireland") contains a large number of representations of implements of various types. See also the same writer's "Worked Flints," PBNFC Series II vol. iii pp. 548, 612: Wilde, *Catalogue* p. 12: Wood-Martin *op. cit.* pp. 375-6.

[2] For examples of such classifications see G. R. Buick, "On flint workshop sites at Glenhue, Co. Antrim," JRHAAI xvi p. 120: W. J. Knowles, "Irish Flint Scrapers" (with many illustrations), JRSAI xxviii p. 367. For further illustrations see JRHAAI vol. xvii plates ii, iii, facing p. 111: numerous plates illustrating Mr. Knowles's reports on the sandhills of Ireland, in PRIA vols. xvi-xxii, and his paper on "Prehistoric Stone Implements from the River Bann and Lough Neagh," PRIA xxx p. 195: some of these are reproduced in IPCT. These last two references may be taken as repeated under most of the following paragraphs in this section.

[3] *Catalogue* p. 16, reproduced in IPCT p. 92.

occurrence would lead us to expect. The following quotation from Mr. Knowles's paper on these tools, just now cited, will go far to explain why this should be so :—

"I knew an enthusiastic collector who went round the country encouraging the children to collect every piece of flint which they found. In this way he soon accumulated a large quantity of implements of every description. His object, however, was merely not to miss any of the better class of implements. These he added to his collection ; but scrapers and such poor things were used to gravel the walks round his dwelling-house. This is not an isolated instance, as many collectors have acted in a somewhat similar manner."

As to the use of scrapers, Mr. Knowles describes an interesting experiment which he made with the skin of a kid. This was first pickled in alum, till it had grown dry and hard, and useless for any purpose. A flint scraper was then taken, and the inner surface of the hide assiduously scraped with it ; this process made it completely flexible, so that it could easily have been worked into a garment, if it were required to do so.[1]

4. *Awls* or *Borers* (Fig. 2 *d*).—These are flakes which have been narrowed to a point at one end, by chipping away the sides.[2]

5. *Hollow Scrapers* (Fig. 2 *e*).—Flakes with a semi-circular hollow broken out of one edge. They were probably intended for smoothing down the cylindrical wooden shafts of arrows or javelins. Another theory is that they were two-toothed saws ; this is less probable, although it is certainly possible to saw through a wooden stick with such a tool.[3]

6. *Saws* (Fig. 2 *f*).—These are flake-knives, in which the cutting edge is more or less deeply toothed by secondary chipping.[4]

7. *Minute Flints.*—Mr. Knowles figures and describes a series of minute flakes found by him at Bundoran (Donegal).[5] These not a little resemble the "pygmy flints" which are closely associated with the Azilian culture ; but the association in which these objects are found forbid us to refer them to the Azilian period. They resemble small scrapers or borers in appearance. But it is not necessary to confine pygmy flints to the Azilian period ; they may have been used at all times for such purposes as teeth for bone harpoons. This is probably what Mr. Knowles's Irish pygmy flints actually are.

[1] *Journal Anthropological Institute*, ix p. 323.
[2] PRIA xxx plate xiii nos. 21-23 : reproduced IPCT p. 88.
[3] PRIA vol. xxii, plate facing p. 372 : reproduced IPCT p. 91 : *British Museum Stone Age Guide* p. 117.
[4] For numerous illustrations of this type of tool, see W. J. Knowles, "Irish Flint Saws," JRSAI xxiv p. 341. See also IPCT p. 93.
[5] "Fourth Report on the Prehistoric Remains from the Sandhills of the Coast of Ireland," PRIA xxii p. 331, esp. p. 362.

8. *Choppers*.—These also were first described by Mr. Knowles [1] as larger than scrapers, not of any well-defined shape, but all with a thick back and cutting edge, capable of being held in the hand and used for chopping. He adds that " seen singly or found in a different situation one might not feel inclined to acknowledge the greater number of them to be implements at all, but when compared together they have a common character." They first came to light at Whitepark Bay and Portstewart; later, similar objects were found at Fisherstreet (Clare), but described rather loosely as " celts ".[2]

The foregoing tools are all derived from the flake, and the only treatment which they have received is along the working edge. We shall now consider the tools which are surface-chipped, that is to say, formed and finished by means of minute chipping over the entire surface of the object. The workmanship of many of these tools is of a very high order of merit.

9. *Knives* (Fig. 20).—Surface-chipped knives are usually oval in outline, and are about 3 to 6 inches in length. Sometimes they are of a semi-oval outline, with one edge straight and the other curved.[3]

The surface-chipped knife seems to be a refinement, ultimately derived from a crude flake knife. There is an intermediate form which has been described by Buick,[4] in which there is one sharp straight cutting edge, forming the longest side of a scalene triangle.

10. *Javelin-* and *Arrow-Heads* (Fig. 2 *h-m*, *n*).—These are distinguished one from the other by size, the javelin-heads being twice or three times the average length of the arrow-heads. There is a considerable variety of types. The heads are oval (leaf-shaped), lozenge-shaped, or triangular; the edges may be straight or concave; the lozenge-shaped heads may be equilateral; or else may be as though formed of two triangles, base to base, the butt being a small triangle with an obtuse angle at the apex, the point a long triangle with an acute angle. The triangular heads may have either a straight base, or else a concave base, thus forming two rudimentary barbs at the angles. There may or may not be a tang accompanying a head of any shape: sometimes no barbs flank the tang, sometimes there is one barb (giving a superficial resemblance to the Solutrean *pointe à cran*), sometimes two. As

[1] *Journal Anthropological Institute*, vii 203, ix 324.

[2] In PRIA xxii p. 355. See also JRHAAI xvii plate iii facing p. 111, plate iv.

[3] See Wilde, *Catalogue* p. 14, PRIA xxii p. 373, bottom row; xxx plate xv.

[4] G. R. Buick, " On a particular kind of flint knife common in the county of Antrim, Ireland," *Proceedings Soc. Antiqu. Scot.* xxii p. 51: *Idem*, " On the development of the knife, as shewn by specimens common in the county Antrim," JRHAAI xviii p. 241. Another specimen is figured in Wilde, *Catalogue* p. 15.

arrow-heads of different types seem to be found together to all appearance indiscriminately, these varieties of type do not appear to have any chronological or other importance. The associations in which arrow-heads are sometimes found shew that they continued to be used down to a late date. For example, a curious assortment of incongruities—a polished greenstone "celt," several flint arrow-heads, a dug-out canoe, some lead bullets, and a 10-inch mortar, found in engineering works near Toome, close by Loch nEach, has been put on record.[1] It must be said, however, that there is no satisfactory evidence that these objects are to be treated as contemporary: they seem to have been collected by the workmen without supervision. Mr. R. Day reports other implements from the same site,[2] though his description gives no idea of their types; he compares them to the early Palæolithic implements from Abbeville!

The wooden shaft in which the arrow-head was mounted was split at the end, and the flint head inserted; resin was used to glue the two together, and security was obtained with a tight binding of gut. One or two arrow-heads retaining their original handle, in whole or in part, have been found in peat-bogs.[3]

There is an especially Irish form of large javelin-blade of flint, with flat sides ground smooth, and chipped round the edges into a very symmetrical lozenge form, the angle at the base being a little less acute than that at the tip.[4] Mr. Knowles possessed some specimens of this type which still display the stain of the resin, stencilled, so to speak, on the surface of the flint: they are now in Belfast Museum. This form of javelin-blade is one more link between Ireland and the Iberian Peninsula, as the type is also found in Portugal.

The majority of the recorded flint javelin- and arrow-heads come from the north of Ireland;[5] but Mr. Day reports a barbed arrow-head of rather large size from Co. Cork.[6]

[1] By R. S. Charnock, in *Proceedings Soc. Antiqu. Lond.*, Series II vol. ii p. 118.

[2] In JKAS viii p. 226. See further (Sir) J. Evans, "On some discoveries of stone implements in Lough Neagh, Ireland," *Archæologia* xli part 2 p. 400, where the possibility of the objects being of comparatively recent date is envisaged.

[3] One from Kanestown Bog (Antrim) is described and figured by Mr. Knowles, JRHAAI xvii p. 126; and another from Ballykillen (Offaly), now in Cambridge, in Wilde's *Catalogue*, p. 254: reproduced IPCT p. 96.

[4] See Evans, *Stone Implements of Great Britain* p. 353: Wilde, *Catalogue* p. 26: *British Museum Stone Age Guide* (3rd edn.) plate facing p. 116 and p. 117.

[5] For a large series of drawings of different types of arrow-heads, see G. R. Buick, "Irish Flint Arrow-heads," JRSAI xxv p. 41. A rather roughly-drawn plate of different forms from Sligo will be found in JRHAAI xviii p. 88. See also Wilde, *Catalogue* pp. 19-22, IPCT p. 95: W. J. Knowles, "Irish Flint Arrow- and Spear-heads," *Journal Anthropological Institute* xxxiii p. 44.

[6] "Flint Arrow-head, Co. Cork," JCHAS Series II vol. xiii p. 197.

The remarkable arrow- or javelin-head (hardly a "spear-head"), said to have come from Oldcastle (Meath) is most probably not of Irish origin at all, but imported in modern times. Mr. Rotherham, who describes it, admits that he can find no analogue nearer than Behring Strait.[1]

The use of the bow, to which arrow-heads bear testimony, involves as a consequence the use of a *bracer*. This is a rectangular disc of bone or (more commonly) of stone, polished smooth, about 3 inches in length and 1 inch in breadth, with one, two, or three holes pierced through it at each end. Its purpose was to protect the archer's hand and wrist from the stinging blow of the released bow-string. For this purpose it was secured to the left hand of the archer,[2] with cords passed through the holes.

11. *Fabricators* (Fig. 2 *g*).—These are tools resembling miniature Campignian picks, which were used to execute the fine chipping with which the various tools of this nature were made.[3]

12. *Daggers*.—These are leaf-shaped knife-blades with a sharp point, chipped over the surface. They are familiar in England,[4] but typical specimens from Ireland are not recorded. Approximations to the type, are, however, not unknown.[5]

Daggers with the handle as well as the blade chipped out of flint are well known in Scandinavia, and are, indeed, among the finest products of the flint-chipper in the world. There is one example of Irish provenance, but, from an unknown locality,[6] in the Royal Irish Academy's collection, and another from Scarriff (Clare), which was in the Day collection.[7]

Hammer-stones have been found in every site where there is reason to believe that flint implements were manufactured. These are simply pebbles of hard stone, of a size convenient for grasping in the hand; they betray the use that has been made of them by marks or abrasions on the sides and ends.[8]

Anvil-stones is a name given by Mr. Knowles to certain flat discs, or rounded pebbles, of stone, with a hemispherical

[1] E. C. Rotherham, "Remarkable Spear-head," JRSAI xxvi p. 171.
[2] See Wilde, *Catalogue* p. 89, where the object is called a "burnisher".
[3] See IPCT p. 99: PRIA xxx plate xvi Figs. 88, 91.
[4] Evans, *Stone Implements* p. 353.
[5] See, for example, figures in Wilde, *Catalogue* p. 27 (there called "pick"): PRIA xxii p. 338, Fig. 1, and *idem* xxvii p. 108.
[6] Wilde, *Catalogue* p. 14 (reproduced IPCT p. 93).
[7] R. Day, "Danish Spear-head," JRSAI xxv (1895) p. 176. The object in question is certainly a dagger, not a spear-head; the author connects it with the Víking raids, which shews the necessity of studying even prehistoric monuments chronologically, so far as possible.
[8] Illustrations will be found in PRIA xxii p. 344 Fig. 14, p. 382 Figs. 115, 116 (reproduced IPCT Fig. 97).

depression in the middle of each face.[1] He considers that they were used " for the purpose of a rest for the core or piece of flint while being operated upon ". In this case we must suppose that the hollow was made as a result of the operation of the flint-worker, and had no definite purpose in itself. This must, however, be considered doubtful, for the hollow is usually too regular in its formation to have been produced in a manner so fortuitous. On the other hand, it is not easy to suggest an alternative explanation. They are hardly hammer-stones: for the hollows should in that case have such a shape, and be in such a position, as to afford an easy grasp to the fingers and thumb; but this is by no means always the case. Sometimes, but rarely, two cavities are found on the same side.[2]

2. *Polished Stone Implements*

However uncertain the date of chipped flint implements may be, there can be very little doubt that the majority of the polished stone implements are to be assigned to the earlier phases of the Age of Bronze. No doubt the custom of polishing stone tools, especially hatchet-heads, began in the Neolithic period; indeed, polished Neolithic hatchet-heads provided the pattern upon which the first copper hatchet-heads were modelled. But the stone hatchet-head, though tedious and difficult to manufacture in comparison with the easily-fused and moulded copper implement, yet had too many advantages over its later rival to be discarded altogether. The material of which it was made was abundant, and was therefore more easily obtained and cheaper than metal; it was heavier than the copper hatchet-head, and therefore was more effective; and its edge, such as it was, did not trouble its owner by turning, as the edge of a copper axe must have been doing continually. Accordingly we find polished stone hatchet-heads in associations which we must necessarily assign to the Bronze Age, owing to the presence of objects known to belong to that stage of civilization.[3]

All kinds of hard homogeneous stones were used as materials for polished stone implements. They were first chipped roughly into shape, and were then polished smooth by being rubbed back and forth upon a smooth plate of stone. A polished stone

[1] See PRIA xxii p. 383; also JRHAAI xvii plate vii facing p. 115; IPCT p. 98.
[2] See, for example, PRIA xvii plate xii Fig. 8.
[3] One such hatchet-head is said to have been found associated with a *socketed* (the latest type of) bronze hatchet-head: PRIA xxxiv p. 16; some would bring the use of this tool down to an even later period. Polished hatchet-heads have been found in crannóg sites and in the earth in Norman mottes: but it is possible that in such cases they merely happened to be in the earth which was manipulated by the builders.

hatchet-head was found in the bottom of a peat-bog at Ballyclosh (Antrim),[1] along with a flat plate of sandstone upon which it must have been polished; and the Royal Irish Academy possesses a grinding-stone of the same kind, from the Knowles collection, with six hatchet-heads that had just been finished, but had not yet received their final polish. These were found all together at Culbane (Antrim), on the banks of the Bann.[2] In any large collection of antiquities a complete series of stone hatchet-heads can be made, shewing the gradual transition from the roughed-out, unpolished, block to the finished product. The polishing first appears upon the edge; in the beginning it was no doubt merely the result of continual wear produced on the stone by use. This suggested the finishing-off of the edge, making it more effective by rubbing away irregularities and so reducing the friction which its original roughness would cause. Later, the process was extended over the entire surface. Often, however, even in a completely polished specimen, some of the preliminary chipping had been sunk too deeply to be altogether ground away, and thus irregularities are produced in the smooth surface. Otherwise a well-polished stone tool is a real work of art.

The above process of manufacture can be reconstructed from waste specimens, unfinished or spoiled, which strew the ground wherever there has been the site of a manufactory. The most remarkable sites of the kind are in the neighbourhood of Cushendall (Antrim), described by Mr. Knowles.[3] A representative series of specimens from these sites are in the National collection. Some of the specimens from the Bann seem to have been first sawn into shape,[4] doubtless with sand and water agitated with flat slabs of stone or with wooden laths.

The following are the chief tools found in polished stone:—

1. *Hatchet-heads*.—These, and the corresponding bronze tools, are frequently called " Celts ". This meaningless ghost-word should be discarded once for all, and in these pages we avoid it altogether, except in quotations.

[1] JRSAI xxiii p. 157.

[2] PRIA xxx p. 219, and plate xix Fig. 126: reproduced in IPCT p. 110.

[3] W. J. Knowles, " Stone-age factories near Cushendall," PBNHFC Series II vol. v p. 421, also in JRSAI xxxvi p. 383, and in *Journal Anthropological Institute* xxxiii p. 360. This paper has an additional value as an exposure of the injury wrought to prehistoric archæology by the commercialism of the mere collector. Mr. Knowles tells us how his movements were spied upon by his rivals, and how, when they had penetrated the secret of his discoveries, they flooded the place, spoiled the market, and turned the once simple-minded inhabitants into forgers. Compare the unhappy experiences of Mr. Worthington Smith, described in his book *Man the primeval savage* (London 1894) p. 294 ff. Mr. Smith might have omitted the adjective from the title of his book!

[4] PRIA xxx p. 315.

The normal polished stone hatchet-head is a wedge-shaped bar of stone, with a bevelled edge at the broader end, and a more or less pointed tail at the other.[1] The body is in cross-section a flat oval, and also swells slightly toward the middle in longitudinal section. Stone hatchet-heads differ in many points of detail among themselves. Some are triangular in outline, the tail being pointed; others tend to a generally rectangular shape, with parallel or only slightly tapering sides. In such cases the tail may end in an edge, as in the example described in Canon ffrench's paper just quoted, or, more commonly, in a flat face, of oval shape. This face is usually at right angles to the main axis of the tool, but not infrequently it is oblique to that line. In some of the latest specimens the sides are flattened, and the edge shews a tendency to expand, with rudimentary horns at its ends. This clearly betrays the influence of the corresponding metal tool. A study of the recorded discoveries of associated groups of hatchet-heads does not encourage the hope that these different shapes can be fitted into a chronological scheme.[2] Mr. Knowles gives an elaborate classification, with numerous illustrations of different forms; [3] but some of these must be described as freaks rather than types.

Large stone hatchets are comparatively rare. Elsewhere [4] Mr. Knowles gives statistics from his own immense collection. There were in it not more than a score of specimens between 12 and 18 inches in length; rather more numerous were those from 8 to 12 inches. The majority lie between 3 or 4 inches and 7 inches, while there were not a few only 1 inch long. A hatchet-head from Co. Monaghan 14½ inches long is described by Mr. De Vismes Kane.[5]

Certain hatchet-heads are wrought in highly ornamental stone, brought to a superfine polish. These beautiful objects would certainly have lost their lustre very quickly if they were submitted to the rough treatment in store for an ordinary stone hatchet. The surface would have been chipped, and the beauty of the stone, which the artificer evidently appreciated and sought to enhance, would have been destroyed. It is not credible that such hatchet-heads were intended for practical

[1] A "celt" with a "cutting edge at either end" is described by Rev. J. F. M. ffrench, "On two rare stone implements found at Lough Gur, Co. Limerick," JRSAI xxii p. 42.

[2] See on this question, E. C. R. Armstrong, "Associated finds of Irish Neolithic Celts," PRIA xxxiv p. 81.

[3] W. J. Knowles, "Irish Stone Axes and Chisels," JRSAI xxiii p. 140. For other illustrations of various types see Wilde, *Catalogue* pp. 41-45.

[4] UJA II ix 6.

[5] W. F. de Vismes Kane, "Account of two Antiquities presented to the Academy," PRIA xv p. 2.

use; rather were they ceremonial in intention. Most likely they were mounted in elaborately carved wooden handles, like the well-known ceremonial adzes that are used in the sacred rites of the Hervey Islanders.

There is some doubt as to the Irish provenance of some of these ornamental hatchets. Two such objects in jade are said to have been found in Co. Antrim,[1] but the place of discovery rests, apparently, on the testimony of the unlettered people from whom the objects were purchased; and the skilled criticism of Canon Greenwell and of Sir John Evans agreed in assigning them to New Zealand!

The ordinary hatchet-head was mounted in a wooden handle of about the same length as a modern axe-handle, by being passed into a hole cut through the end of the wooden bar; which was slightly expanded to give room for the hole, and to leave enough of the wood for strength. No doubt the head and the handle were further strengthened by means of leather thongs, cords, or gut: and the hatchet-head was sometimes smeared with some kind of gum to make it adhere to its haft. A specimen shewing traces of this treatment, from Co. Fermanach, is now in the Belfast Museum.[2] A good example of a stone hatchet-head retaining its wooden handle, from Co. Monachan, exists in the Royal Irish Academy's collection.[3] There is no example recorded in Ireland of the horn sheath mounting found in the Swiss lake dwellings.

In some cases there is a cup-shaped depression in each face of the hatchet-head, as though a beginning had been made to drill a hole right through. This hole is seldom completed: I have a specimen, formerly in the Knowles collection, in which this has been done (Fig. 4 *a*, p. 58). We must suppose that in most cases the depression alone was aimed at. Presumably this was for the reception of pins, passed through holes in the sides of the socket, which would fix the hatchet-head more firmly in its place; the pins being kept in position by means of thongs. This is a more probable explanation than that the hollows were religious or magical in purpose, analogous to the cup-marks cut in the surfaces of rocks.[4] These hollows in the sides of hatchet-heads are not very common anywhere, but in

[1] Rev. Canon MacIlwaine, "Notice of a jade celt discovered in Co. Antrim," JRHAAI xv p. 316.

[2] JRHAAI xviii p. 482: *Quarterly Notes Belfast Museum*, xxiii p. 4.

[3] Figured in Wilde, *Catalogue* p. 46; the figure has been frequently reproduced, as in IPCT p. 103. A handle from some unspecified place (also in Monachan) has been figured in JRSAI xliv p. 171.

[4] This explanation is considered and not wholly rejected by Professor Capitan in *Revue de l'École d'Anthropologie*, xi p. 125; but on the whole he favours the explanation given in the text above.

Ireland they are distinctly rare. Wakeman [1] figures an anomalous example with a hollow sunk in the edges as well as in the broad sides. This was, perhaps, to admit of the tool being mounted as an adze if required.

Another method of mounting consists in cutting a groove round the body of the hatchet-head. The handle in this case would be made of some flexible object, such as a rope or withe, and looped round the groove, the two ends being then bound tightly, along with some stiffening splint, to form a handle. This form is rare in Ireland, but it is not unknown; there are examples figured by Wilde,[2] and another was in the possession of Mr. R. Day.[3]

Sometimes pieces of shale are found which have a deceptive appearance of being long, narrow hatchet-heads. It is clear that these objects would not stand the strain of practical use, and they are, in fact, nothing more than *lusus naturæ*. It is quite possible, however, that some of them were used in ancient times as imitation hatchet-heads for sepulchral use. One such, found in a cist at Carnmoney (Antrim), is described and figured by Mr. F. J. Bigger.[4]

2. *Hammers* and *Hammer-axes*.—These objects differ from the hatchet-heads that we have been describing in that they are perforated for the reception of a wooden handle. To make the perforation must have been a formidable task; it almost of necessity implies the use of metal tools, aided with watered sand used as a means of attrition. Many years ago, an American *savant*, Dr. Charles Rau, made an experiment to see whether such perforations could be made without metal tools.[5] He used sand and water, agitated by means of a drill of hard wood. The work, says the experimenter,

> "was not very fatiguing, but tedious beyond description, taxing my patience to the utmost degree. I never could endure the work for more than two hours in succession, and sometimes I laid the stone aside for weeks and months, until I had mastered sufficient energy to resume the labour. Thus it took two years before I succeeded in piercing the stone. I cannot state exactly how many hours I devoted to the work, but by measurement I obtained the result that two hours of constant drilling added on an average not more than the thickness of an ordinary lead-pencil line to the depth of the hole."

[1] W. F. Wakeman, "Some remarks on stone celts as found in Ireland generally, and on two examples from Co. Antrim in particular," JRSAI xxi p. 155.

[2] *Catalogue*, p. 85.

[3] JRHAAI xv p. 6: Wood-Martin, *Pagan Ireland* p. 397 illustrates an analogous method of mounting from Australia.

[4] "Some recent archæological discoveries in Ulster," PRIA xxxiii p. 1. Other specimens are figured by Knowles, PRIA xxx plates xviii, xix. See also Wilde, *Catalogue* pp. 33, 34.

[5] Charles Rau, "Drilling in Stone without the use of metals," Smithsonian Institution, Washington, *Annual Report* 1868.

It is not unfair to complain that this is a strangely vague result to obtain *by measurement;* we do not know how Dr. Rau pointed his pencils, so that we are in the dark as to the thickness of his pencil-strokes. I have just made one, which I find to be 1/48-inch thick, as nearly as I can measure it without special apparatus. At that rate it should take a total of 96 hours to drill a hole through a stone 1 inch thick; and probably bronze-age man was more patient than Dr. Rau confesses himself to have been. Some examples, in which the perforation is unfinished, shew a small cylindrical projection in the middle of the depression, indicating that a hollow drill (a long bone of a bird or animal, or else a tube of elder-wood) was used. This is never found in the partly sunk hollows in the sides of axe-heads—an indication that these are not to be regarded as incomplete perforations.

There are three principal types of hammers and hammer-axes. The *first* and simplest are globular masses of stone, which were no doubt mounted on handles like maces, and used in the same way.[1] An advance on this type is illustrated by a beautiful polished hammer-head from Portora (Fermanach).[2] This is cylindrical in shape, with the perforation running through the middle at right angles to the long axis. The two ends are convex, forming hammer-ends; there is no axe-edge in this tool.

Both large and small implements of the mace form have been found. Two small hammer-heads of stone, about 2½ inches in length. were found at Fethard (Wexford), in association with a mould for casting bronze socketed hatchet-heads. These were presumably the hammers of a coppersmith, and they illustrate the late survival of stone for the manufacture of such implements.[3]

The *second* form has one end beaked into an axe shape, while the other end has a hammer-like butt. Wilde figures a number of examples of this type,[4] of which there are some varieties. The cutting edge may be mounted as an axe or as an adze, the former being by far the commoner; and the butt may be flat-faced or rounded.[5] I happen to have an unfinished example, from the Bann; the hole for the haft has been begun at the top and the bottom, but it was not carried through (Fig. 4 *b*).

[1] A fine example from near Clonmel is figured in JWAS 1908 p. 97 (illustration repeated, *idem*, 1915 p. 118).

[2] Figured in UJA II ii 47.

[3] W. Frazer, "Description of two small hammers of micaceous sandstone found at Fethard," JRHAAI xix p. 293.

[4] *Catalogue*, pp. 79, 80.

[5] A splendid example of this type is figured in UJAI iii p. 234.

In the *third* type, there is a beaked edge at both ends of the stone. To this class belong some of the most highly finished tools in stone which we possess; it is evident that much care has been lavished upon their preparation and polishing. Some of them are certainly to be regarded as intended for ceremonial use: such a one is a remarkably fine double axe, found at a place between Rathvilly and Hacketstown (Carlow), and now in the Royal Irish Academy's collection.[1] From several points of view this object is remarkable. It is of a very artistic shape; but the edges are too blunt to make it an effective axe-head, and the hole drilled for the reception of the handle is too small in bore to receive a handle thick enough to resist the shocks of practical work. For these reasons its ceremonial purpose is, so to speak, written all over it. It was found in association with certain bronze objects, vaguely described as "a small axe with ornamented blade" and a fragment of a pin, and was presumably contemporary with them.[2]

Wood and Horn

There is every probability—we may without indiscretion say every certainty—that wooden tools and implements, and wooden war-clubs, were in common use during the Stone and Bronze Ages; but we cannot name any surviving example of the woodwork of those remote periods of history. A few implements of horn, however, still remain to us. The sawn-off tines of antlers are sometimes found in shore-sites such as Whitepark Bay; they were used as picks or perforators. Sometimes also the butt-ends of stags' horns have been found, with a hole pierced through them for mounting on handles, so as to serve as mallets.[3]

The Introduction of Metal-working

Gold and copper were the first metals to attract the attention of Man. At the first these must have appeared in his eyes as mere shining stones; only by experience did he learn to differentiate them from the non-metallic substances out of which he was accustomed to fashion his tools and his weapons.

[1] W. Frazer, "On a polished stone implement of novel form" PRIA xvii p. 215. The principal illustration in this paper is reproduced in IPCT p. 106.

[2] A simpler example of the same type is figured in PRIA xxx plate xix p. 127. For a typological study of hammer-axes see R. A. Smith, "The perforated Axe-hammers of Britain," *Archæologia* lxxv p. 77. Several Irish examples are there figured.

[3] A number of illustrations of horn objects such as these will be found in JRHAAI xvii, plate facing p. 119. See also Wood-Martin, *Pagan Ireland* p. 405: Wilde, *Catalogue* p. 252.

Indeed, those characteristics which we call " metallic " would for a time render them useless to a stone-age man. They were softer than the hard flint with which he was familiar; they could not be chipped into shape, for the hammer made an indentation upon them, without detaching flakes from the surface. No doubt it would be found possible to beat them laboriously into a desired form, and this technique has been in use among different communities of nature-folk; but tools made of a material so malleable were scarcely fit to withstand rough usage.

Gold, indeed, could never have been made fit for the wear and tear of practical life. Since the days of which we are speaking, economists and dentists have found practical uses for it; but in Neolithic times, owing to its softness, it could not have served any but ornamental purposes. Its conspicuous colour and its rarity must early have made it a concomitant of wealth and of luxury, as these conceptions were understood at the time. Copper, however, had greater possibilities; moreover, it has a fairly wide distribution over the earth's surface. The fate of stone, as the exclusive material for tools, implements, and weapons, was sealed, when it was found that copper could be melted under a moderate heat and run into a mould; thus casting it into any desired shape with incomparably less labour than was involved in the chipping of an analogous tool out of flint.

We do not know, and are unlikely ever to know, where, how, and exactly when this discovery was made. Nor can we tell whether it was made once for all, and distributed over the world from one centre, or independently in different centres and at different times. Neither of these alternatives is against the laws of Nature; both are equally possible, and all that we can say is that the advocates of the former hypothesis are more vocal and more dogmatic than are those of the latter. Viewed as an incident in the history of humanity, the beginning of the Metal Age does not belong to a very remote time; the immense length of the Palæolithic period had to be unrolled, as well as a Neolithic period of no small duration, before it could be inaugurated. Still, it happened many thousands of years ago. Small copper objects were in use in Pre-dynastic Egypt: this is earlier than any evidence of the use of copper that Europe has afforded. It is therefore conceivable, though by no means capable of exact proof, that Europe learnt the technique of copper metallurgy from Egypt.

At a date rather more recent, a further discovery of no less importance was made; that if a little tin be mingled with the copper in the crucible, a more satisfactory material is produced.

The alloy fuses at a lower temperature, and is notably harder than the pure metal. The edge of a pure metal tool, for all the ease of its manufacture, must, as we have seen, have been a constant nuisance to its owner, on account of its liability to turn. In contrast to this, we can draw an impressive object-lesson, in the possibilities of a bronze edge, from Egyptian statues, some of them graven in the hardest and most intractable of stones, with no more adequate tool than a bronze chisel supplemented with the friction of watered sand. Presumably the discovery of the effect of tin upon copper took place in some stanniferous region, but more than this we cannot say. Wherever the discovery was made, it was the real inauguration of the Bronze Age; the preceding Copper Age is of the nature of a transition, in which the Age of Stone overlaps the Age of Metals; and its relics are not universal over the earth as are those of the Stone and Bronze Ages.

Mining and Metallurgy in Ireland

The great wealth of Ireland in objects of gold and of bronze shews that the art of metal-working had liberal patrons in the country; and numerous moulds of stone prove that at least a large proportion of the metal objects were locally manufactured.

The circumstances in which the use of metal began in Ireland differed widely from those attending the same forward movement in Britain. The bronze culture was introduced into the latter country by a round-headed race of invaders, coming from the region of the Rhine. This people, a branch of the Alpine Race, carried with them into their new home a knowledge of elementary metallurgy, and also the characteristic type of pottery vessel known as the *beaker*. So important are these vessels as an element in the relics of these people, that it has become customary to speak of them as "The Beaker Folk" ever since the admirable researches of Lord Abercromby.[1] Vessels of this type are all but totally absent from Ireland; a fact which indicates that the two islands were differentiated at the beginning of the Bronze Age, just as the contrast between the Irish Campignian and the British Azilian indicates a similar differentiation at the beginning of the Neolithic period. For all that the two islands are so near together, *Britain is essentially an island of the North Sea, Ireland of the Atlantic Ocean;* and this difference is fundamental throughout the whole history of their mutual relations. The Beaker Folk never came with

[1] See his monumental work, *A Study of the Bronze-age Pottery of Great Britain and Ireland* (Oxford 1912).

their arts to Ireland: in metallurgy Ireland was at least at the first, a giver, rather than a receiver.

Mr. O. G. S. Crawford, in a most suggestive paper,[1] has emphasized with great effect the crucial importance of the stores of gold which, during the Bronze Age, made Ireland one of the richest of European countries. In number and weight the ornaments in native gold contained in the Royal Irish Academy's collection far surpass those in the possession of any other museum in Northern Europe; and the quantity that has found its way into the melting-pot is probably greater still.[2] We are only beginning to realize the importance which this possession of gold gave to Ireland at the time in question.[3] It made the country, *ipso facto*, a mistress of trade. Irish gold ornaments are found scattered far and wide over the Continent. It is certainly suggestive that streams of deposits of copper flat hatchets lie across England on lines of traffic which, radiating from Ireland, are directed toward sites which have yielded Irish gold ornaments. This points to the conclusion that merchants, as they travelled along the roads, sometimes had the misfortune to lose the hatchets which they had been carrying with them for their own use on their perilous way; and these remained where they fell until they were found by modern antiquaries. So far as it goes, the fact, which is clearly brought out by the maps accompanying Mr. Crawford's paper, makes it at least an admissible hypothesis that Ireland was one of the centres of distribution from which the rest of Northern Europe learned the first rudiments of metallurgy.

There can be no doubt as to the chief source of supply of gold in Ireland. The valleys surrounding the hill called Crochan Kinshela (Wicklow) contain streams, the gravels of which were at one time rich in alluvial gold. Most of these were worked out in the Bronze Age; one or two escaped notice, and were discovered by the peasants of the district, in the last quarter of the eighteenth century. For several years they collected the gold, with no small profit to themselves; but in 1795 the discovery of a nugget weighing 22 ounces caused the Government to close on the site. For some time official efforts were made to exploit the gravels, and to discover the parent vein from which the

[1] "The distribution of early bronze-age settlements in Britain," *Geographical Journal*, xl p. 184.

[2] See E. C. R. Armstrong, *Guide to the Collection of Irish Antiquities: Catalogue of Irish Gold Ornaments in the Collection of the Royal Irish Academy* (Dublin 1920). This official work contains a very thorough study of the history of gold-working in Ireland, as well as descriptions and illustrations of every gold object in the collection.

[3] See on this subject [Sir] Arthur Evans's epoch-making address on *The Eastern Question in Anthropology* (British Association Report, 1896, at pp. 912-3).

alluvial gold was derived. Both enterprises proved failures, and the workings were before very long abandoned.[1]

References to the working of gold are not infrequent in ancient Irish literature. These have been collected by O'Curry, to whose work we may refer the reader.[2] These localize the operations of the ancient gold-workers in the very region where the metal has been found in modern times—the eastern portion of the district called Life [dissyllable] through which the river Ruirtheach runs. But that gold-*mining* was ever carried out there is no evidence to shew, and it is improbable ; all the gold used was most likely derived from alluvial washings.

Copper, on the other hand, was mined for at an early date —at least, at a date early enough for the use of stone hammers and axes. But the whole history of mining in Ireland calls for, and deserves, much fuller treatment than it has yet received. No ancient mines have been adequately described and planned ; the information available is of a most fragmentary nature. Six mine-shafts have been found at Derrycarhoon, Cork.[3] The discovery of twelve stone axes in an ancient copper-working in Co. Cork is recorded in a brief note : [4] and Mr. Day had certain stone hammers in his possession from mine-workings near Killarney. He published a brief note on the subject,[5] in which he mentions that "one of the Killarney guides" had sent him a hamper of twenty or thirty, which he distributed among his friends—not one of them, apparently, going to any museum. The description given of the one specimen which he retained is wholly inadequate, but it seems to have been of the grooved variety (*supra* p. 48).

Close to Bunmahon (Waterford), the copper of which is still exploited, there are many traces of ancient workings. "One almost insulated promontory is perforated like a rabbit-burrow, and is known as the Danes' Island. . . . In the abandoned workings antique tools have been found, stone hammers and chisels, and wooden shovels.[6]

It would be hard to know what to make of a curved wooden tube of yew, with a slot cut for some distance on the concave side of the curve, and a movable "mouthpiece" at one end, which was found in an old copper mine at Schull (Cork). The

[1] See Armstrong, *Gold Catalogue* chapter i ; JRSAI xliii p. 183.

[2] E. O'Curry, *Manners and Customs of the Ancient Irish* (London 1873) numerous references in the index under the heading "Gold" ; see also R. R. Brash, "The precious metals and ancient mining in Ireland" JRHAAI xi p. 509. Two papers by J. Windele on "Ancient Irish gold" UJA I ix 28, 197, may be worth glancing through (with some discretion).

[3] UJA I ix 212 : reproduced in IPCT p. 123.

[4] JRHAAI xv p. 341 : reproduced IPCT p. 122.

[5] JRHAAI xvi p. 281. See also S. C. Hall's *Ireland* i. 240.

[6] R. Kane, *The Industrial Resources of Ireland* (Dublin 1844) p. 179.

mine was so old that some of the spoil-heap round the mouth was covered with 2 feet of naturally-grown peat. Whether the tube had an intrinsic or an accidental connexion with the mine cannot be conjectured.[1]

During the Copper Age Ireland took a leading place in Northern Europe. Her wealth in gold would in any case have assured this to her; but there is good reason to believe that she was a centre of distribution of other commodities as well. Nature's niggardliness to her in the matter of tin placed her at a disadvantage when the use of bronze began to supersede copper. Mr. Hallissy has contributed a note on the occurrence of tin in Ireland,[2] in which he mentions six places in the country where tinstone has been found; but he adds, "as far as we know, the mineral was never found in quantities sufficient for the extraction of the metal, even on the most modest scale". Now there is reason to believe that the tin-owners were good business men, fully alive to the value of their monopoly. We know how the exact source of supply was kept a secret from the Mediterranean traders. If we can believe Diodorus of Sicily[3] the tin was carried to a mart at a distance, in the island of Ictis, wherever that may have been, and there the negotiations with the purchaser were transacted. It has also been observed that pure tin is very seldom found in bronze-casters' hoards, which suggests the inference that the tin-owners kept the art of alloying in their own hands.[4] Every one of the countless bronze implements that Ireland has yielded is a proof of ancient trade in metals. And if we ask what Ireland can have given in exchange, the answer is ready; she had gold in sufficiency to deck the native lords and ladies of the Bronze Age, and to leave a surplus that would satisfy even the exorbitant demands of the Cornish mine-owners. Ireland's wealth in gold, and her poverty in tin, were the two great economic factors which determined the course of her development during the Bronze Age.

But there is an alternative possibility. It may be that the Cornish mines were actually in Irish hands; or at least that Cornwall was occupied, and its mineral wealth exploited, by a branch of the same people as colonized Ireland. This view was expressed by Dr. Bremer,[5] on the ground that the "beaker" culture, with which the introduction of the use of metals into Britain is associated, has made surprisingly little impression

[1] Figured in *Proc. Soc. Antiqu. Lond.*, Series II vol. v p. 223.
[2] Appended to a paper on "Bronze Celts" by Mr. Armstrong, PRIA xxx p. 524.
[3] *Bibliotheca* v 22.
[4] Evans, *Ancient Bronze Implements of Great Britain*, p. 425.
[5] *Die Stellung Irlands in der Europäischen Vor- und Fruhgeschichte*, p. 5.

upon Cornwall, though we should have expected the new-comers to have taken up their quarters in the chief metalliferous centre of the country. This at least suggests that there was already a strong community there established, which held their ground against the invaders.

Chronology

In dealing with times so remote that we have no assistance from contemporary written documents, the fundamental problem of chronology is always one of extreme difficulty: while at the same time it is absolutely necessary to know at least the relative chronology of the objects upon which our investigations are based, in order to follow aright the development of civilization. In modern research a method known as *sequence-dating* has been introduced and developed with success, especially in connexion with the rich yields of excavation in Egypt. It is based upon the typological evolution of different classes of objects—pins, pottery, hatchet-heads, and what not—and on the observed facts of the association together of definite types of those objects in deposits where they may reasonably be assumed to be contemporary.[1]

As yet the chronological development of the Neolithic period has resisted the application of such methods. This is the darkest of all the periods of European history; the number of deposits, referable thereto, that have been found and *scientifically* excavated has been insufficient to illuminate it. The system has, however, been wonderfully successful in dealing with the Bronze Age, thanks to the superhuman labours and the brilliant insight of the late Dr. Oscar Montelius of Stockholm. We cannot say that the *absolute* chronology of the Bronze Age has been definitely fixed: but the *relative* chronology of its successive phases is now satisfactorily known. A find of bronze-age objects of any reasonable dimensions can be assigned with complete assurance to its proper chronological pigeon-hole. The dating of single stray objects is not quite so certain, owing to the occasional overlapping of types.[2]

The key to the chronology of the Bronze Age in Europe lies in the succession of types of the hatchet-head. This implement continued to be the chief tool during the Bronze Age, as it had been toward the end of the Neolithic period: but it underwent

[1] The system is expounded by Sir Flinders Petrie in JAI xxix p. 295, and in *Diospolis Parva* (Egypt Exploration Fund 1901) p. 4 ff.

[2] For references to the publications of Montelius, on the chronology of the Bronze Age in Europe, see the bibliography of his works appended to *Opuscula archæologica Oscari Montelio dicata* (Stockholm 1913). His "Chronology of the British Bronze Age" will be found in *Archæologia* vol. lxi part i p. 97.

a number of transformations, dictated principally by the nature of the material of which it was made. We may give here an outline of the history of the evolution, referring the reader for fuller particulars to special treatises.[1]

A copper hatchet-head, exactly reproducing the shape of the corresponding tool in stone, would be both inconvenient and wasteful. A tool shaped like a stone hatchet-head, with its swelling sides, would use up too much of the costly material. Moreover, it would necessarily have to be hammered, not cast, into shape; for its manufacture would require a double mould, such as was not in use at the beginning of the Metal Age. The *single* mould is a depression of the required shape, cut in the flat upper surface of a stone block.[2] This could not produce tools shaped on both sides; for such a purpose a mould consisting of two pieces, with a channel provided for pouring the molten metal into the hollow intercepted between them, would be essential.

Moreover, a flat blade would be not only more economical of the metal, but would actually be more efficient. Accordingly, the earliest metal tools found in Ireland are flat hatchet-heads of practically pure copper, rather small in size, and wedge-shaped in outline, with a slightly rounded cutting edge (Fig. 4 *c*).

Wilde[3] figures an Etruscan tool of metal shaped like a convex stone axe-head, as well as an Irish mould for casting similar objects; but these are to be regarded as reversions, rather than as steps in a forward evolution.

When the manufacturer proceeded to fix the blade, thus produced, into a haft, and to apply it to practical use, he met with a serious difficulty. If he inserted it into a wooden handle, as he had been accustomed to do with the stone hatchet-heads, the striking of the blade would drive the metal backward into the handle, however tightly it might be bound with thongs; and before long the wedge-like pressure of the expanding blade would split the haft. Some other method of mounting had to be invented. The difficulty was overcome by taking a section of the branch of a tree, which had at its upper end the stump of a subsidiary branch—after the manner of the Greek letter Γ, but with the horizontal limb rather short in proportion to the length of the vertical. The wood was of extra strength at the junction of the side-branch, owing to the presence of cross

[1] See Montelius, *op. cit.*: British Museum *Guide to the Bronze Age*: A. L.-F. Pitt-Rivers, *The Evolution of Culture and Other Essays* (Oxford 1906): E. C. R. Armstrong, "On some associated finds of Bronze celts discovered in Ireland" PRIA xxxiii p. 511.

[2] An illustration of such a mould will be found in Wilde, *Catalogue* p. 392.

[3] *Catalogue* pp. 395, 396.

grains. Having selected his haft, the artificer made a split in the projecting stump, vertical for an axe-mounting, horizontal for an adze-mounting; the blade was then inserted into the



FIG. 4.—Bronze Age: First and Second Periods.

setting thus provided, and was secured in position by means of thongs. Thus was the *flat hatchet* produced; the first stage in the evolution of the implement.

As might be expected, the earliest essays in the manufacture of such tools were very rough. The shape is irregular, and the casting bad, with many air-holes in the texture of the metal: the very early copper-founder's hoard from Carrickshedóg (Wexford) contains some good examples of these primitive forms.[1] But even during the course of the epoch of pure copper there was no small improvement in these respects; the later copper hatchet-heads are shapely and well made, with gracefully curved sides, beyond which the edge projects. The shape of copper axe-heads is sometimes imitated in stone, as in an example from Loch Gur (Limerick), formerly in the present writer's possession, but now in the Royal Irish Academy's collection.[2] The improvement in the shape and manufacture of the copper axe-head has been traced by Coffey.[3] The flat type persisted into the true Bronze Age, for flat axe-heads made of the alloy are not infrequent. Armstrong figures a remarkable example overlaid with gold.[4]

But perfection was not yet attained. However tightly the blade might be bound in the haft, it would tend to slip sideways; it was inevitable that the thongs should be sufficiently elastic to admit of their yielding to a strain. This defect would increase with the continued use of the tool, so that in time the blade would drop out of its handle. Moreover, although the wedge-like action of the blade was not so effective as in the earlier method of hafting through a hole cut in the wood, nevertheless it was there, and constantly threatened to split the wooden haft.

A very simple device remedied these shortcomings. Raised *flanges*, running along the edges of the blade on each face, caught on the sides of the slot into which the blade was inserted, and so prevented a sideways movement. In like manner a *stop-ridge* crossing each face of the blade, prevented it from penetrating too far into the wood. In this manner the *flat flanged hatchet-head* was evolved [5] (Fig. 4 *e*).

The flanges and the stop-ridge were at first of quite small projection above the surface of the blade. But before long they began to increase in size. At about the middle of the Bronze Age they had coalesced to form the margin of a pocket-like groove on each side of the blade, which received the lips of the slot in the haft. The high projecting stop-ridge was bracketed out from the plane of the blade; the bracket often

[1] Described by Dr. Bremer in JRSAI lvi p. 88.
[2] Illustrated in IPCT p. 104.
[3] G. Coffey, "Irish copper celts" JAI xxxi p. 265. For further illustrations see Wilde, *Catalogue* p. 363.
[4] JRSAI lii p. 135.
[5] Illustrations in Wilde, *Catalogue* pp. 364, 365, 390-1: IPCT p. 136.

takes a form resembling a mediæval heater-shaped shield, cast on the blade. This is the first time that *cast* ornament appears upon the bronze hatchet-head; ornament on the earlier forms, when it is present at all, is cut or punched. The blade of this new kind of hatchet is smaller, on an average, than that of the flat flanged hatchet. It is known by the corrupted Icelandic name *palstave*,[1] and is the characteristic tool of the third period of the Bronze Age (Fig. 5 *a*, p. 68). A loop is usually cast on one side of the palstave, to serve as an additional security—a cord being passed through it and fastened to the shaft of the handle. This loop persists through the subsequent developments, though it is not invariably present. Sometimes (but rarely) there is a loop on each side of the tool, which must, in such a case, have been mounted as a chisel—unless the extra loop was for the purpose of reversing the blade in case it should become worn at one end of the edge.

The next development consists in the increase of the sides of the characteristic side-pocket of the palstave at the expense of the part corresponding to the old stop-ridge. The side flanges now become so large that they surround and tightly grasp the projecting stump in which the blade is mounted. This suffices to hold the blade in place, so that the stop-ridge is no longer necessary. The large curved flanges being fancifully compared to two pairs of wings, the hatchet-head which bears them is called the *winged hatchet-head* (Fig. 5 *b*).

The final stage in the development of the implement was reached when the wings of opposite sides were extended so far as to overlap and coalesce. The flat tail of the blade was then suppressed, and the wings on each side formed a socket, into which the mounting stump was thrust.[2] It was now no longer necessary to split the mounting stump. Thus was the *socketed hatchet-head* produced (Fig. 5 *c*, *d*). Socketed hatchet-heads almost always have a loop on *one* side; specimens with a loop on *both* sides are among the rarest of archæological types. Dr. Frazer has illustrated a mould for casting such an object from Fethard (Tipperary).[3]

These five stages in the development of the hatchet-head enable us to separate out as many periods in the Bronze Age,

[1] It is not clear whether the word is borrowed from *pállsstafr*, the staff or handle of a digging-tool or spud (*páll*), or from *pálstafr*, a kind of *missile* mentioned by some of the sagas (see *Kongsskuggsjá*, ed. Halfdan Einersen (1796) p. 386 and footnote there). In either case the name is a misnomer, as applied to the tool before us. Illustrations in Wilde, *Catalogue* pp. 373-82: on the last of these pages is represented a palstave with two side loops. See also IPCT p. 143.

[2] An example retaining its wooden handle from Edenderry (Offaly) is now in Cambridge. See Wilde, *Catalogue* p. 370 Fig. 257: reproduced IPCT 127.

[3] In JRHAAI xix p. 289. Some with one loop only are figured in Wilde, *Catalogue* pp. 384, 385. See also IPCT p. 165.

each of which has its own characteristic implements and weapons. The best available evidence for the contemporaneity of objects is afforded by groups which, having been deposited at one time, presumably belong to the same period. As examples of such groups we may name the three following :—

Cromachs (*Antrim*). A garment of cloth, made of goat's hair, secured with leather straps, and containing wrapped up a socketed hatchet-head, a gouge, a razor with its leather case, and the fringes of some article of clothing (perhaps the wrapping itself) which had been woven with great skill out of horsehair ; [1] a disc-headed pin.

Tulla (*Clare*). Two small socketed hatchet-heads, a disc-like pin, a bronze cupped bracelet, and a bronze ring.[2]

Kilfeakle (*Tipperary*). A socketed hatchet-head, two *socketed* chisels, a sickle, and a gouge, found wedged together into a split stone.[3]

Other important groups are described by Mr. Armstrong.[4]

On the other hand, the chronological interpretation of such hoards must be tempered with reason. A hoard found in Annesborough (Antrim), contained a palstave, a *bronze* torque, three quite plain bronze bracelets—all of which, taken by themselves, might be dated to the middle Bronze Age. But with them, and undoubtedly deposited at the same time, was a Roman provincial brooch, of a type to be dated to the first century A.D. Clearly we have here a fortuitous assortment of odds and ends, probably collected by some late manufacturer of bronze ornaments for re-melting.[5]

The Five Periods of the Bronze Age

The First Period

The First Period of the Bronze Age is little more than an extension of the Age of Stone. Polished stone and chipped flint implements are freely used. The flat hatchet-head is the only tool of metal ; with it is associated the *Triangular Dagger* (Fig. 4 *d*), the first weapon to be made in copper. It is, however, doubtful if the triangular dagger begins at so early

[1] G. Coffey, "Two finds of late Bronze-age objects," PRIA xxvi p. 119: illustrations reproduced IPCT pp. 174-5.

[2] G. Coffey, *op. cit.* IPCT, p. 175.

[3] G. Coffey, "Find of bronze implements at Kilfeakle, Co. Tipperary," JRSAI xxviii p. 86 : C. E. Ryan, "On a recent discovery of bronze implements," JWAS x p. 11, with excellent photograph.

[4] E. C. R. Armstrong, "Some Irish Bronze Age finds," PRIA xxxvi p. 134.

[5] G. Coffey and E. C. R. Armstrong, "A find of bronze objects at Annesborough," PRIA xxxii p. 171.

a date as the copper hatchet-head, although the two were in contemporary use.

The triangular dagger is derived from the dagger-blade of flint, already described. It consists of a rather broad and short triangular blade with a rounded butt, in which there are rivet-holes, usually three in number, for securing it to the handle. The latter was of wood, bone, horn, and sometimes, in later times, of bronze.[1] The triangular dagger is in universal use over Europe: Montelius assigns it to the First Period, and this is true in the main; but it probably does not date from the very beginning of the First Period, nor is its use confined thereto. Until the invention of bronze, the pure copper dagger cannot have been a very satisfactory weapon; the delicate edge of the blade had to be frequently sharpened, in consequence of which the edges, originally straight, frequently assume a hollow or concave shape. Indeed, it not infrequently happens that all the sides have been ground away, and little remains but the strong central rib which almost always runs down the axis of the blade.

The Second Period

The Second Period is marked by the introduction of bronze as opposed to pure copper—or, rather, copper as pure as primitive metallurgists could obtain it, without the *intentional* addition of any other substance. With the Second Period the Stone Age is finally closed, and the Age of Metal begins.

The ornamentation of metal objects is another new characteristic of the Second Period. It is quite evident that the manufacturers of tools had begun to take an artistic pride in their handiwork. The tool was hammered smooth after it was drawn from the mould, and care was taken to give it a graceful and symmetrical outline, and an artistic finish. In hammering up the flanges on the sides of the hatchet-heads of the period, a screw or cord pattern was often produced, or else a row of pyramidal knobs. The two faces of the blade of the axe-head are very frequently decorated with patterns, formed of combinations of punched marks (see Fig. 4 *e*): usually, as we should expect, in the portion of the blade which is exposed; but examples are not unknown in which the ornamentation is so situated that it must have been hidden inside the wooden haft.[2] Sometimes the exposed surface is covered with ornament, and the tail is roughened with random punch-marks. The ornamentation always is rectilinear, usually taking the

[1] See for an illustration Wilde, *Catalogue*, p. 463 Fig. 342.
[2] Such as a specimen figured by Mr. Armstrong in JGAHS x p. 70.

form of a zigzag or herring-bone pattern. Curved lines are seldom used, and cast ornament, apart from the flanges and the stop-ridge, is unknown.[1]

The *Halberd* (Fig. 4 *f*) is the most characteristic weapon of this period. It is the first of a number of important derivatives from the triangular dagger ; for it consists essentially of such a dagger, mounted, not on a short handle in line with the axis of the blade, but on the head of a long handle at right angles thereto. The halberd is, in fact, the first approximation to a solution of the military problem of how to attack an enemy while keeping him at a distance. At Birr (Offaly), a copper halberd was found in association with three hatchet-heads and a damaged triangular dagger. The hatchet-heads were of copper, on which account the hoard has been assigned to the First Period, and a date in the First Period deduced for halberds in general.[2] But the hatchet-heads, although of copper, were slightly flanged, shewing that they are preferably to be assigned to the Second Period. The difficulty of procuring tin in Ireland must prepare us for the possibility of finding pure copper in occasional use where chronological considerations would lead us to look for bronze. With few exceptions the large halberd-blades found in Ireland are made of copper, not of bronze : the exceptions to this rule are exceptional in type as well, and are almost certainly foreign importations.

Coffey [3] has made a study of this form of weapon, and has indicated the following classification of types :—

1. Short broad blades, with blunt rounded point. No midrib. Four rivets securing the blade to the handle.
2. Short blade with straight axis and midrib. Four rivet-holes.
3. Similar blades, though sometimes rather longer, with three rivet-holes. Specimens with two and with six rivet-holes are also known, but these are too exceptional to be treated as separate types.
4. Long blades, curved after the fashion of scythe-blades with strong mid-ribs and with three rivet-holes. This is the most characteristic Irish form ; a few specimens, probably imported from Ireland, have been found in Scotland, but none in England, nor are any known to exist on the Continent.

Much [4] has compared the copper halberds from Ireland with those from Spain on the one hand, and the bronze halberds of Germany on the other. The latter are more highly developed,

[1] A rare example of an axe-head *without flanges* bearing ornament, from Stoneyford, Antrim, is figured in IRHAAI xiii p. 153. This is no doubt a second-period object, although the flanges are absent.

[2] Coffey, *The Bronze Age in Ireland*, p. 12.

[3] G. Coffey, "Irish copper halberds," PRIA xxvii p. 94 Full references to other literature will be found in this paper. See also Wilde, *Catalogue* p. 451, 489 ff. : IPCT p. 137 : and *British Museum Bronze Age Guide*, p. 28, where a very peculiar form is illustrated.

[4] M. Much, *Die Kupferzeit in Europa* (Jena 1893) pp. 127 ff.

and are clearly later in date, than the other two; they are made of bronze, and they have bronze handles, cast in one piece with the blade. Montelius, however, has dated them to the beginning of the Age of Bronze in Germany. The Spanish halberds are regarded by Much as being older than those of Ireland: because they are (1) simpler in design—never having subsidiary ribs associated with the central mid-rib; and (2) nearer in general shape to the parent dagger from which they are derived, inasmuch as they never shew the scythe-like curve of the Irish specimens. Moreover (3), the uniformity of the type in Spain is regarded as evidence of greater antiquity; the diversity found in Ireland being an indication that evolution has had time to develop the weapon in various directions. This argument seems to be sound, and it corroborates the dating here adopted, to an early but not the earliest stage of the Metal Age.

Halberds with metal handles are unknown in Ireland; but there is one link with the German type in an Irish example, which has copper washers, of a hollow conical shape, secured between the heads of the rivets and the blade.[1] As a rule the rivets are of a simple dumb-bell pattern; but they are well made, and their neatness indicates the attainment of a considerable skill in metallurgy. The necks of the rivets are remarkably short, shewing that the handle at the point of junction must have been thinner than we should have expected it to be. But if it were made of a stout oaken staff, pared down at the point of junction but with a good backing behind it, and well bound with thongs, it would probably have been strong enough to resist all ordinary strains.

Lunulæ (Fig. 4 *h*).—Next to the halberd, the most important metal product of the Second Period is the lunula. This is the earliest form of gold ornament found in Ireland.

It is in the form of a thin crescentic disc. The tips of the crescent, in all perfect examples, terminate in small oval plates, at right angles to the plane of the crescent. The surface of the disc is ornamented with linear patterns—lozenges, zigzags, triangles, etc.—with or without contrasted shading; no curvilinear patterns are used. This decoration is distributed in a remarkable and unexpected way: not over the broad front part of the crescent, which is invariably left plain, except for a little shaded or stippled bordering on the edges; but on the horns, where it would be less visible when the lunula was in position on the person of its wearer. The old notions, that the lunula was worn upright over the head, after the manner of a

[1] Illustrated by Coffey, PRIA xxvii plate iii Fig. 20.

saint's nimbus, and that it is the ornament referred to in Irish literature by the name *mind*, are now so generally abandoned that it is not worth while discussing them. The lunula must have been worn as a neck-and-breast ornament, after the manner of a child's bib; the plates at the ends of the horns serving as buttons, for catching a looped cord which prevented the ornament from slipping off.

When a lunula was not in use, it was carefully protected from the injury to which its thinness rendered it liable by being kept in a flat box, made of two plates of oak of a size and shape adapted to the convex outline of the ornament. A specimen of such a box was found in a bog at Crossdoney (Cavan), and is now in the Royal Irish Academy's collection.[1] The delicacy of the lunula to which the necessity for this box bears testimony, presents a difficulty. How was it prevented from becoming crushed? Its texture is but little thicker than a sheet of gold foil: there is no sign that it was strengthened by being stitched on to any form of backing. With constant use it would surely become crumpled beyond recovery. The answer probably is, that the ornament was *not* worn constantly, but only on very special occasions; and that the wearer did not, on those occasions, indulge in any very active movement. It was ceremonial, rather than merely ornamental.

A second difficulty arises from the position of the engraved ornamentation, which would be hidden when the lunula was in position: especially if the owner wore his hair long. But it may be asked, was the decoration intended to be seen at all? It is scratched or engraved in such extremely fine lines, that even one who, like myself, is blessed with exceptionally good sight, has to look closely at the object to discern the pattern; and if the wearer was in a company, the decoration would be entirely invisible at a little distance, however conspicuously it was displayed. We must infer that the decoration was at least as much magical as ornamental, and that it was therefore no disadvantage—perhaps a decided advantage, in the opinion of the owner—that it should be inconspicuous. There is an unusual specimen from the Day collection in the Belfast Museum, in which the slight marginal shading of the broad portion is carried up to the tips, and there is no other ornamentation.[2]

In a paper presented to the Society of Antiquaries of London, Mr. R. A. Smith has proposed to regard these objects as belonging to cult rather than to culture: that in fact they

[1] It is figured in Coffey, *op. cit.* p. 50: reproduced IPCT p. 143.

[2] Figured in Belfast Museum *Quarterly Notes* no. xlii plate 1. The lunula found at Schulenburg, Hanover (JRSAI xlii p. 48) had a similar scantiness of ornament.

are not ornaments at all, but " moon-discs," used, presumably, in some magico-religious ceremonies, and that the engraved horns are differentiated from the plain middle portion because they represent the " crumpled horns " as contrasted with the smooth frontal portion of a moon-bull.[1] Mr. Armstrong seems inclined to adopt this hypothesis ; [2] but I confess that to me it seems needlessly speculative. It assumes the existence of a moon-cultus, which may have existed in Ireland at the time, but cannot be demonstrated. It does not account for the terminal " buttons," which are absent from the terra-cotta horns found in Swiss lake dwellings and compared by Mr. Smith to the Irish lunulæ. These objects (two of which are illustrated in the paper in question) certainly bear a resemblance to the Irish gold ornaments ; but we can explain this sufficiently by postulating the artistic influence of some examples of the Irish ornament which chanced to fall into the hands of the Swiss artificers.

The late George Coffey, and independently of him Mr. O. G. S. Crawford, have prepared maps shewing the distribution of lunulæ in Ireland and elsewhere.[3] The lessons of these maps are obvious. The surface of Ireland is covered with sites where lunulæ have been found. In the list given along with his map, Coffey enumerates 62 lunulæ from known sites, as well as 27 from unrecorded localities. By contrast England has only 4, all from Cornwall—obviously a link between Irish trade and Cornish tin ; Wales has 1, from Carnarvonshire, a county easily accessible from Ireland ; Scotland has 3, of which two are from the western side ; the third, from Elgin, has travelled further. France has 6, all from parts of the sea-coast easily accessible from Ireland. The remaining specimens are from localities rather more distant : 1 from Luxembourg, 1 from Hanover, and 2 from Denmark. The last might have been " conveyed " in Viking raids. The distribution quite clearly indicates that Ireland was the land of origin of this type of ornament ; and specimens might easily find their way as far as Switzerland.

[1] R. A. Smith, " Irish gold ornaments " *The Antiquaries' Journal* i p. 131.

[2] JRSAI lii p. 138 ff.

[3] George Coffey, " The distribution of gold lunulæ in Ireland and North-Western Europe," PRIA xxvii p. 251 : *Idem*, *The Bronze Age in Ireland* (Dublin 1913) p. 55. The map is reproduced in IPCT p. 141 : O. G. S. Crawford, in *Geographical Journal* xl p. 195. A list of lunulæ with some illustrations will be found in a paper in JRSAI xxvii p. 53. This paper is written to sustain the thesis that these early bronze-age objects were made from Roman coins melted down ; the student will therefore reserve it for his lighter moments, apart from the illustrations. See also Armstrong's *Gold Catalogue*, already cited. But see especially the very elaborate study of these objects and of their distribution, and the inferences to be drawn from them regarding ancient Irish trade, by M. Salomon Reinach, entitled " Les croissants d'or irlandais " (*Revue Celtique* xxi pp. 75, 166).

Gold *discs* (Fig. 4 *d*), circular in shape, and usually about 3½-4 inches in diameter, are not infrequently found. Just as the lunulæ have been called "moon-discs" so these have been interpreted as "sun-discs" on the analogy of the famous sun-chariot from Trundholm Moss in Denmark.[1] Such an interpretation is quite needless; it is not likely that they had any more recondite purpose than the decoration of garments. Frequently they have thread-holes pierced through them; a very few—there is a good example in the British Museum—have marginal loops. They were presumably sewn on to some kind of stiff backing to keep them in shape. The surface is decorated, often elaborately so, with engraved or repoussé patterns. The finest example on record is one found at Lattoon (Cavan); it is of large size, and is very elaborately decorated with groups of concentric circles and other devices. The interruption of the pattern is noteworthy; we shall see an analogous interruption in the decoration of shields.

The Lattoon disc is from a late date in the Bronze Age, as is shewn by the cupped bracelets with which it was found associated.[2] But that the type is of earlier origin is shewn by the discovery of a specimen in a grave at Mere Down, Wiltshire, associated with a copper dagger.[3]

The Third Period

The metal implements of the Third Period shew a considerable advance in the technical skill displayed in their manufacture.

The triangular dagger still persists, though naturally it is now made of bronze and is much more artistically finished than before. It is also rather longer in proportion to its breadth: and as in the earlier periods, it was usually secured with three rivets (though sometimes with two, or with four) to the handle. This, as a few surviving specimens teach us, was made of bronze, wood, or horn.[4]

[1] For this theory and for numerous illustrations see *Proceedings Soc. Antiqu. Lond.*, Series II vol. xx p. 6: *British Museum Bronze-Age Guide* p. 110. See also R. Day, "Gold plates and discs found near Cloyne, County Cork," JRSAI xxix p. 413: Petrie, "Irish antiquities," *Dublin Penny Journal* 26 Jan. 1833 p. 244: R. MacAdam in UJA I iv p. 164: R. Ousley in TRIA vi p. 31.

[2] See Armstrong, *Gold Catalogue* p. 47: see also *Man*, vol. xx no. 45: IPCT p. 185.

[3] M. E. Cunnington, "Prehistoric gold in Wilts," *The Antiquaries' Journal*, v p. 68.

[4] See illustrations and descriptions of Irish daggers retaining their handles in JKAS iv p. 286, JRHAAI xii p. 195, xiv p. 186, JRSAI xxvii p. 423. See also Wilde, *Catalogue* pp. 458, 462-6, IPCT p. 145, *Reliquary and Illustrated Archæologist* iii plate facing p. 193. In a carn on Topped Mountain (Fermanach) a dagger was found with part of a gold band which seemed to have surrounded the handle: the carn also contained a polished stone hatchet-head (see report by Plunkett and Coffey, PRIA xx p. 651).

It was in this period that the first tentative experiments were made in the direction of inventing the *spear*. The fact

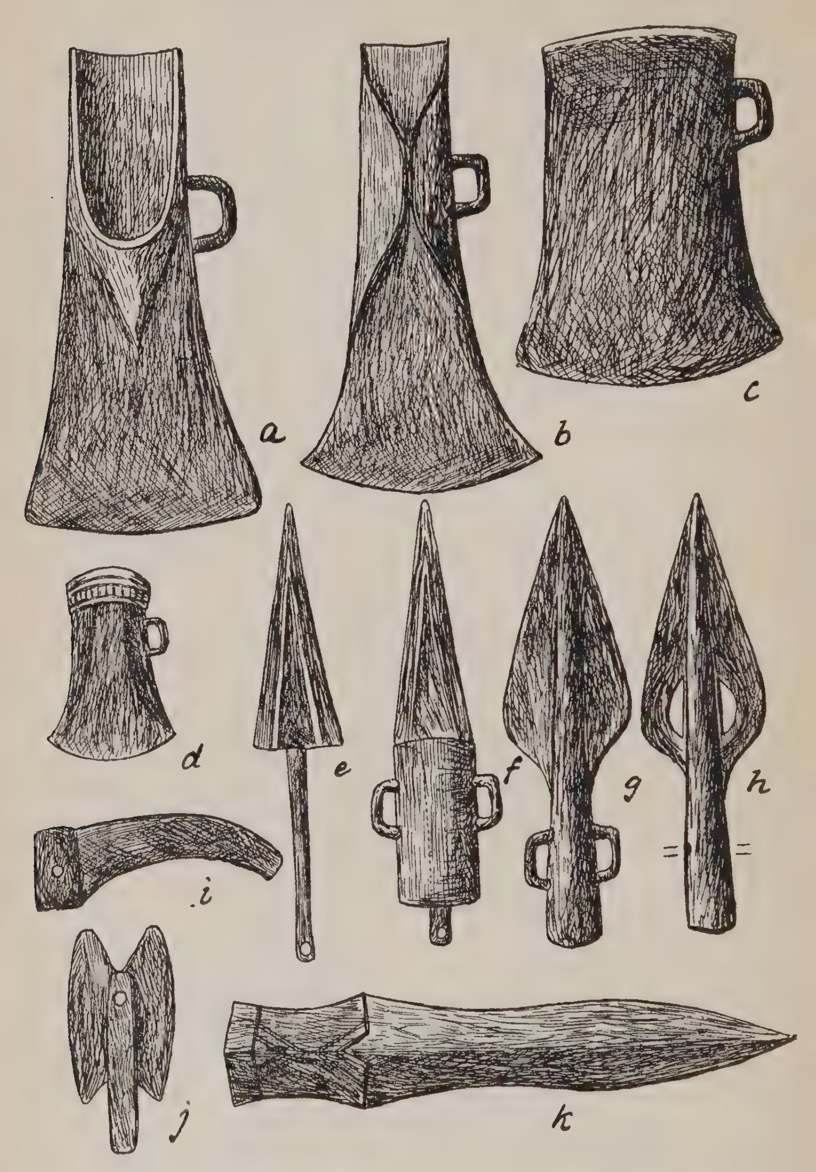


FIG. 5.—Bronze Age: Third, Fourth and Fifth Periods.

that the bronze spear-head is a comparatively late addition to the armoury of the warrior indicates that the spear, as con-

trasted with the javelin, was a weapon unknown during the Stone Age. Had the spear, which is retained in the hand of the warrior, been then in existence, it would have early been tipped with bronze, a material in which a sharper point could be secured. But a javelin would continue to be tipped with stone, for it was intended to be cast, and once cast might never be recovered. The same argument applies to arrows, which are never found tipped with metal until the introduction of iron had reduced the value of bronze.[1] Stone objects, sometimes called "spear-heads," should thus be called javelin-heads. without exception.

The first approximation to a spear would be made by mounting an ordinary dagger-blade on the end of a long shaft, with the same purpose as suggested the invention of the halberd —to strike the enemy at a distance. But the dagger-head riveting would be insufficient to withstand the strain to which such a weapon would be subjected; it was therefore necessary to invent something stronger. The blade was accordingly provided with a long narrow tang, to be thrust into a hole at the end of the shaft: a rivet passing through a hole at the end of the tang kept the spear-head in position. This produced a weapon known as the *Arreton Down Spear-head*, from the name of a place in the Isle of Wight, where a hoard of bronze objects including some representative specimens of this type of weapon was found (Fig. 5 *e*).

The Arreton Down spear-head is very rare in Ireland.[2] However, it was sometimes made in the country, as is proved by the existence of a mould for casting objects of the type, found with others in Co. Tyrone.[3]

But this form of weapon had a great disadvantage. The boring of rivet-holes into the end of the handle weakened it, and made it apt to split when the spear-head was thrust into it. To prevent this, it was protected with a ferule—compare the ferule which, for the same purpose, surrounds the end of a modern chisel-handle. This ferule was cast as a separate piece; it was the first attempt at hollow casting which we find in the history of the Bronze Age (Fig. 5 *f*). Usually

[1] A "bronze arrow-head" is described in JRSAI xxi p. 483 as having been found in Co. Limerick. The description, and especially the dimensions, make it obvious that whatever the object may have been, it certainly was not an arrow-head. It seems to have been an Arreton Down spear-head. On the other hand, Wilde (*Catalogue* p. 503) figures some bronze arrow-heads, but these are probably to be assigned to the Iron Age.

[2] See G. Coffey, "Notes on the classification of spear-heads of the Bronze Age found in Ireland" PRIA xix p. 436: *Idem*, "Further notes on the development of the spear-head," JRSAI xli p. 20.

[3] G. Coffey, "Moulds for primitive spear-heads found in the County Tyrone," JRSAI xxxvii p. 181.

it was circular below, and above had a mouth-shaped opening, to accommodate it to the shape of the butt of the spear-head. Moulds for casting such a ferule were also found in the Tyrone hoard, just alluded to, and are figured in Coffey's paper describing it. Holes, corresponding to the rivet-hole in the tang, were drilled in the sides of the ferule.

Torques now take the place of lunulæ as the chief gold ornaments. The torque is a collar of gold, or more rarely of bronze; a *silver* torque, one of five alleged to have been found in a hoard at Rathcormac (Cork), has been published, but it is most probably a modern forgery.[1] Whatever the material, a torque is either a bar or a ribbon of metal, of uniform breadth, twisted in screw fashion and curved into a circular loop. The ends of the loop are not twisted, but are drawn out and bent into hooks, which catch each into the other. Often the ornament is made yet more elaborate, by twisting, not a simple ribbon, but a bar of metal, square in section, or else hammered out so as to be Y-shaped in section; thus giving twists of four or of three edges. The size of the torques shews that they were, as a rule, intended as ornaments for the neck; but some of them were too small for such a purpose, and must have been armlets: others were too large, and, if meant for human wear at all, must have been worn as girdles. Such are the two great torques found, it is said, in 1810 [2] at Tara, and now in the Royal Irish Academy's collection.[3] It is not impossible that these costly ornaments were votive offerings, and were intended to decorate some stone or wooden representation (iconic or aniconic) of one of the deities worshipped at that ancient sanctuary. The torque, as an ornament, persisted throughout the remainder of the Bronze Age, and lasted into the following Iron Age.

The Fourth Period

In the Fourth Period we come to a break in the course of evolution, which must be due to some historical events unknown. It is impossible to separate the wheat of history from the chaff of folklore when we are dealing with a date so remote as *circa* 800 B.C., the time at which the Fourth Period may be regarded

[1] See JRHAAI xvi p. 52, and a plate in the same volume at p. 182, where a number of gold torques from Donegal are also figured. It is, however, conceivable that the silver torque is genuine, but in that case it cannot be older than the Víking period. The ornament stamped upon it would agree with this dating.

[2] There is some evidence that they were actually found rather earlier.

[3] They are illustrated in *Dublin Penny Journal*, 10 November 1832, p. 157: Wilde, *Catalogue* (Gold) p. 71: Coffey, *Bronze Age in Ireland* plate vii: IPCT p. 149: Armstrong, *Catalogue of Irish Gold Ornaments* plate xii Figs. 80, 81.

as in progress. But there must be some reason for the rarity in Ireland of the winged hatchet-head, elsewhere a link in the development of this tool,[1] which here passes straight from the palstave to the socketed hatchet.

Moreover, there is a further fact in connexion with the socketed hatchet as found in Ireland, which corroborates the same conclusion. In Britain, the socketed hatchet often displays on its sides two cast ornaments in relief, resembling two C's back to back, thus : Ɔ C. These curves are vestigial survivals of the edges of the wings of the winged hatchet, from which the socketed hatchet is derived ; indeed they are a clear proof of this derivation. But they are never found in Ireland —with but one possible exception, figured by Evans.[2] Thus the evolution is interrupted in Ireland, and resumed after the socketed hatchet had come into existence. The Irish specimens of the latter form, which exist in great numbers, were made after the model of importations which did not happen to bear this particular decoration : and therefore it never became established in the country.

On the other hand, it seems probable that Ireland retained her old initiative in the development of the *spear-head*. This passes through a number of phases, which have been traced with great skill by Canon Greenwell and Mr. Parker Brewis in a monumental monograph.[3] The separate tanged spear-head and the ferule now coalesce, and the tang becomes suppressed (Fig. 5 *g*). There is an intermediate stage when the spear-blade still retains its dagger-like shape ; but gradually the socket, as we may now call it, runs up through the mid-rib of the blade, thus producing a perfect unity of design.

The rarity of the Arreton Down spear-head in Ireland shews that it was early abandoned in that country ; indeed, the first attempts at true socketed spear-heads may perhaps be dated to the end of the Third Period.

The practice of securing the spear-head to the haft, by means of a rivet, is abandoned at about the same time as the socket is introduced. Instead, a loop is cast upon the sides of the socket, always lying in the seam between the two halves of the mould ; and by means of this loop the spear-head was secured with cords to the shaft. At first the loops were cast low down on the socket, near the mouth : but they tend to move upward, and toward the end of the Fourth Period they

[1] See Armstrong's important paper on the "Distribution of bronze celts in Ireland," *Proceedings Soc. Antiqu. Lond.*, Series II vol. xxvii p. 253, where, *inter alia* the relative frequency of the different kinds of bronze hatchet-head is set forth.

[2] Sir John Evans, *Ancient Bronze Implements of Great Britain* p. 132 Fig. 156.

[3] "The origin, evolution, and classification of the bronze spear-head in Great Britain and Ireland," *Archæologia* lxi p. 439.

are found just under the wings of the blade; in fact, they are treated artistically as extensions of ribbing upon the face of the blade.[1] The position of the loops may be accepted as a rough criterion of the relative age of any individual specimen. There is but one exception to the otherwise invariable rule that the loops are always immediately opposite one another. It is a mere freak; a figure of it will be found in Wilde's *Catalogue*.[2]

Messrs. Greenwell and Brewis express surprise at the fact that the method of securing by means of a rivet was abandoned, seeing that it was afterwards re-introduced. There is, however, a simple reason at hand. Some of the Arreton Down spear-heads retain their rivets in position; it is, indeed, the length of these rivets that is relied upon as the chief proof that these weapons were spear-heads, and not daggers, as they had previously been supposed to be. The rivets are of the ordinary dumb-bell variety. But this is an unsatisfactory fastening for a spear-head, as it is difficult to remove from a broken spear-shaft, so that the snapping of the shaft might mean the loss of the precious metal head. The loop was, therefore, invented as a substitute; and its invention in Ireland is indicated by the fact that it is actually anticipated there by the previous stage of Arreton-Down-cum-ferule spear-head. The ferule-mould from Omagh shews that in Ireland loops were already cast upon the sides of the spear-head at this early stage of its evolution.

There is a considerable variety in the form and ornamentation of the fully-developed spear-head; and there are certain barbed forms found in Britain which never appear in Ireland. The side loop is the especial characteristic of the Fourth Period spears. The moulds shew that these loops were at first cast semi-circular in form,[3] and that they must have been hammered to the flat form which they assume in all extant specimens after the spear-head had been withdrawn from the mould. In this process, care was taken to give them an artistic form: generally a symmetrical oval or lozenge shape. The Fourth-Period spears are often, but not always, of comparatively small size. The papers of Coffey, and of Greenwell and Brewis, already cited, will be found to contain a large number of illustrations of the several subordinate types, for details of which we cannot here find space.

[1] A large number of examples are illustrated in Wilde, *Catalogue* pp. 496-502. See also IPCT p. 155.

[2] P. 496 Fig. 363: reproduced in IPCT p. 157.

[3] See G. Coffey, "An important find of moulds in Co. Antrim," PRIA xix p. 436 for illustrations: also IPCT p. 156.

The *Socketed Dagger* (Fig. 5 *k*), makes its appearance at about the same time as the socketed spear-head. This weapon has a leaf-shaped blade, like a miniature sword, and is fitted at the butt end with a socket, having rivet-holes for securing it to a handle. The socket of these weapons is not circular, but a rather flat oval in section, accommodated to the shape of the dagger-handle.[1] As in the spear-head, the rivet-holes lie in the seam produced by the meeting of the two halves of the mould.

The *Rapier* (Fig. 6 *a*), is another derivative from the triangular dagger, from which it scarcely differs except in length. The dagger is about 6 inches long, the rapier about 15 inches. Some rapiers are admirable works of art: we may especially refer to one found in the upper lake of Loch Erne and now in the Royal Irish Academy's collection, thanks to the generosity of Mr. Thomas Plunkett, who presented it as a memorial of his friend, the former keeper, Mr. Coffey. It is a most artistic casting, and is decorated gracefully with raised ribbing. An altogether exceptional specimen is now in the same collection—the famous rapier found at Lissane (Derry): it is distinguished from all others by its great length (2 feet 6¼ inches) and its superb finish. In the middle of the blade the breadth is only ⅝-inch. It has been frequently illustrated.[2]

The *Sword*, however, quickly superseded the rapier. It had the advantage that it could be used as a cutting as well as a thrusting weapon. The bronze-age sword has a sharp point, above which it widens, then narrows again, and then widens slightly to the haft. The curves are always most graceful; swords are among the products of the Bronze Age which best shew the artistic skill of the craftsmen. The use of the sword as a cutting weapon imposed a side strain upon the handle, which made the dagger-mounting no longer sufficient. The rivets would be apt to tear through the thin tongue of metal at the butt of the blade, if a vehement blow were given. Accordingly, a handle was cast in one piece with the blade; it was a tongue of metal, shaped so as to give a convenient grasp to the hand, and ending in a triangular or fish-tail expansion. It was provided with two or more rivet-holes, whereby hafting-plates could be secured to the sides, thus giving the necessary thickness to the handle [3] (Fig. 6 *b*). It is seldom that the

[1] For illustrations, see Wilde, *Catalogue* p. 465: British Museum *Bronze Age Guide*, p. 105.

[2] See Coffey, *Bronze Age in Ireland*, p. 59: *Idem*, "An account of rapiers and early swords of the Bronze Age," PRIA xxx p. 88: IPCT p. 158: Wilde, *Catalogue* p. 442: Evans, *Bronze Implements* p. 252. Other specimens figured in Wilde, p. 448.

[3] In IPCT p. 160 some *rapiers*, distinguished as such by their dagger mounts, are illustrated and inadvertently described as "fourth-period *swords*".

hafting-plates remain; they were of wood, bone, or other perishable materials. There is one sword found in a bog at

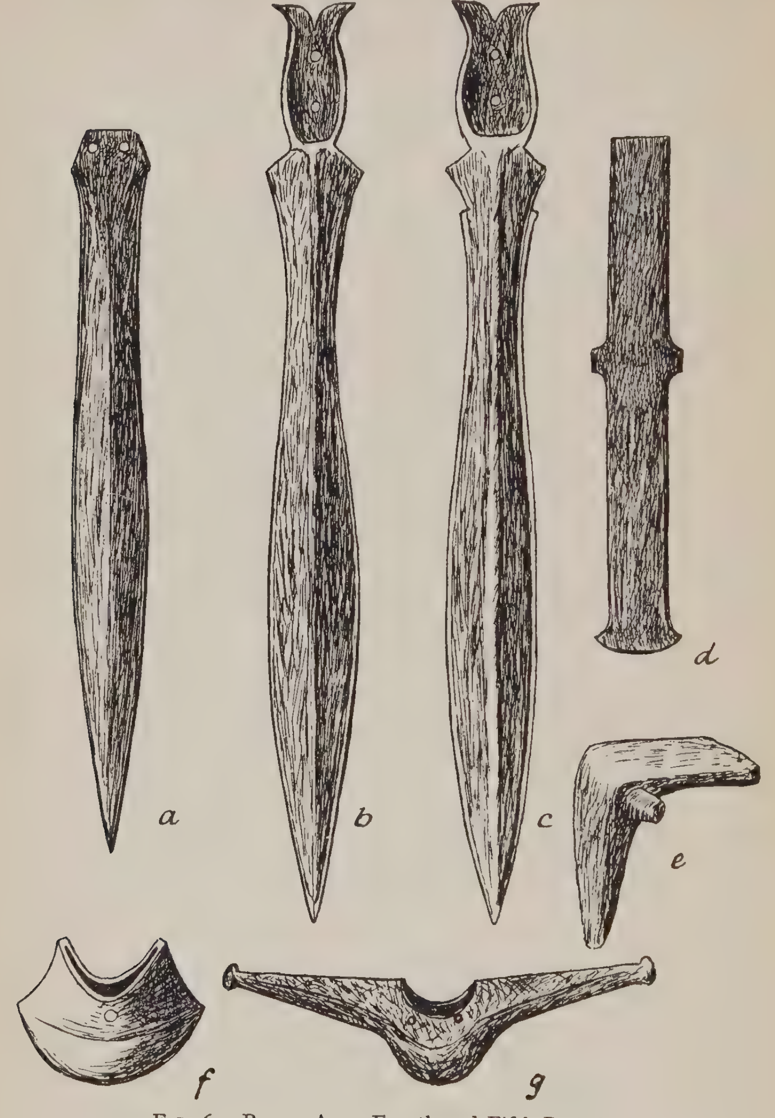


Fig. 6.—Bronze Age: Fourth and Fifth Periods.

Muckno (Monachan) which has imperfect hafting plates remaining, said to be made from bones of a whale.[1] Another, from Mullylagan (Armagh) has plates of deerhorn.[2]

[1] Well illustrated in JKAS ix p. 24.

[2] See description and illustration, JRHAAI xii p. 257. See also IPCT p. 161.

Swords, when not in use, were kept in scabbards of wood or of leather. No specimens of scabbards of such perishable materials survive in Ireland. There are fragments of a *bronze* scabbard recorded as having been found, with other pieces of scrap bronze, in a hoard collected for re-melting by some artificer working in what is now County Roscommon.[1] The wood and leather scabbards were tipped at their lower end with a bronze *Chape*, of which specimens are fairly common. Those of the Fourth Period are simply formed, following generally the outline of the tip of the sword, and sometimes terminating below in a knob (Fig. 6 *f*).

Sickles are probably to be ascribed to the Fourth Period. Bronze sickles, as compared with those in modern use, are of small size. The blade measures in length from about 3½ to 5 inches. Dr. Frazer[2] compiles a list of those recorded up to 1892 in Ireland, from which he was able to indicate a scheme of classification. All the sickles thus described are provided with a socket for fitting them to a wooden handle; usually a rivet-hole is perforated through the side of the socket. In the first class the socket is open at each end and is not longer than the butt of the blade, which springs from it sideways (Fig. 5 *i*); in the second the blade likewise springs sideways from the socket, but the latter is prolonged downward, and is closed at the top; in the third the blade rises from the closed top of the socket.

The blade is usually curved, though there is a considerable variety in the degree of curvature in all three classes. The concave side of the blade has a sharp edge, the convex side being blunt like the back of a knife. In the more ornate examples the blade is strengthened with ribbing, running longitudinally parallel with the axis of the blade. The tip either is blunt or else has a sharp point.

No sickle without a socket is reported as having been found in Ireland; on the other hand, no mould for casting a socketed sickle has, as yet, made its appearance in the country. Strange to say, a double mould for casting an *unsocketed* sickle has come to light. It formed one of a group of moulds discovered in the neighbourhood of Ballymoney (Antrim) and is now in the Royal Irish Academy's collection. The hoard contained a number of moulds for casting looped socketed spear-heads,

[1] JRHAAI xi p. 120; xv pp. 265-6. A similar hoard, found on Boe Island, Loch Erne, is recorded in the latter volume, p. 259.

[2] W. Frazer, "On 'sickles' (so-called) of bronze found in Ireland," PRIA xviii p. 381. We need not trouble ourselves here with the doubts which the author expresses as to the purpose of these objects, or with his conjectures at alternative theories. For further illustrations see Wilde, *Catalogue* p. 527: IPCT p. 164.

and may therefore be assigned to the Fourth Period.[1] But the anomalous conjunction of socketed sickles and unsocketed-sickle moulds drives home the elementary lesson that we have still much to learn.

The Fifth Period

In the Fifth Period, though palstaves are still in occasional use, the socketed hatchet-head is the normal form. This, as compared with the earlier types, is usually of small size. It is frequently decorated with cast ornament—rows of pellets, circles, etc., in relief. An example of uncertain provenance with zigzag ornament is described by Sir W. Ridgeway.[2] There is almost invariably a loop at the side. The mouth of the socket may be oval, circular, or square in shape.

Chisels may be either tanged or socketed, the former being by far the commoner. Some of them closely resemble modern steel chisels—except that they do not possess the characteristic single-bevelled edge of the modern tool. In some specimens the blade is separated from the tang by a round flat shield, at right angles to the axis of the tool, which acts as a stop to prevent the tang from sinking too deep into the wooden or horn handle. In other cases trunnions projecting from the sides of the tool serve the same purpose (Fig. 5 *d*). A common Irish type has the stem carried below the trunnions for some distance, and then expanding suddenly into a crescentic blade with projecting horns. The socketed chisel resembles the socketed hatchet-head, but the blade is narrower than the diameter of the socket, and the tool is longer in proportion to its breadth. As Second-Period flanged axe-heads shew ornamentation produced with a metal tool resembling a chisel, this type of object must have been already introduced at that early date. By contrast with the chisels, *gouges*, which are commoner in Ireland than in Britain, are all but invariably socketed. There is only one tanged gouge in the great National Collection ; it resembles the type of chisel with a circular stop. Otherwise gouges resemble socketed axe-heads, from which they are obviously derived by curving the cutting edge.[3]

Socketed Spear-heads (Fig. 4 *h*) attain to a high excellence of manufacture during this period. We have seen that the loops on the sides of the socket shew a tendency to move up toward the wings of the blade as the Fourth Period progresses, until they come immediately underneath them, being often

[1] G. Coffey, "Recent Prehistoric finds acquired by the Academy," PRIA xxx p. 83: S. F. Milligan, "Some recent archæological finds in Ulster," JRSAI xli p. 380, IPCT p. 163.

[2] *Man* xix no. 84.

[3] For illustrations of these tools see Wilde, *Catalogue* p. 521 : IPCT p. 261.

treated as prolongations of the ribbing on the surface of the blade. In the Fifth Period the loops actually enter the blade, and appear as openings of purely ornamental purpose, when they do not disappear altogether. The socket of a spear-head from Loch Gur (Limerick) without these ornamental apertures, is artistically ornamented with inlaid gold strips and with gold bands.[1] Instead of loops for thongs, by which the spear-head was secured to the shaft, we now once more have rivet-holes in the side of the socket ; these holes invariably lie in the seam between the two halves of the mould.[2] This is not, however, a reversion to the old method of riveting which was abandoned after the Arreton Down stage. The " rivets " in these latest spear-heads must have been mere pins, which could be easily withdrawn, as no specimens have been found retaining the rivets in position. A small spear-head of this kind was found, embedded in a human skull, at Greenvale (Kilkenny).[3]

There is another variety of perforated spear-head in which the blade is flat and broad, and the apertures in the wings are very small slits, protected by slight raised flanges along the outer edge. A specimen, found in Loch Erne, is figured by Mr. Day.[4] Part of the shaft still remained in the socket of this weapon. It was split at the end : Mr. Day supposed that this was to admit a wedge already placed in the inner end of the socket, which would force the split end open and make it grip tightly on the inside of the socket.

Swords of the Fifth Period resemble those of the Fourth, except that there is a small triangular notch cut from the edges,[5] immediately under the handle, in the later type (Fig. 5 *c*). This is explained by the tendency of the wooden scabbard to shrink, leaving the upper end of the blade exposed. The notch was intended to prevent the hand of the owner of the sword being accidentally wounded in such a case. By chance two groups of swords are figured side by side in a paper by Mr. Armstrong,[6] which shew the contrast between the Fourth and the Fifth Period swords. The one group consists of three swords, found at Latterach (Tipperary) ; none of these display the notch. The other is from Knockadoo (Sligo), and is a group of two swords, both with the notch, associated with two socketed and riveted loopless spear-heads. By contrast,

[1] Evans, *Bronze Implements* p. 312 : reproduced IPCT p. 189.

[2] A fine example is illustrated by Dr. T. B. Costello in JRSAI xxxv p. 67 ; see also JRHAAI xiii p. 315 : G. Coffey, " Ornamented bronze spear-heads with apertures in the blades," PRIA xxx p. 436 : IPCT pp. 166-8. For a variety of spear-heads, see Wilde, *Catalogue* pp. 496-502.

[3] JKAS i p. 30.

[4] JCHAS Series II vol. vii p. 122.

[5] See Wilde, *Catalogue* p. 442 (Fig. 313), p. 444 (Figs. 316, 318).

[6] " Some Irish bronze-age finds " in PRIA xxxvi, on p. 143.

on the next page, there is a group from Youghal with similar spear-heads and *notchless* swords, which would seem to invalidate the evidence; but reference to the accompanying letterpress shews that there is some little doubt as to the objects having been found in association in this case.

Shields throughout the Bronze Age must have been made of wood, wicker, or leather; materials which, though ultimately perishable, were sufficiently hard, and at the same time lighter than metal shields would have been. In consequence, shields are of very rare occurrence. A few bronze shields have survived; but it is doubtful whether these are to be ascribed to the end of the Bronze, or to the beginning of the Iron Age. They are of the same characteristically British type as the beautiful example from Aberystwyth, now in the British Museum.[1] This is a thin circular plate of bronze, with a hemispherical umbo, crossed on the inner side by a handle riveted to the shield. Two other rivets remain in the body of the disc, which secured the shoulder-strap. The umbo is surrounded with repoussé ornament, consisting of a series of concentric circular rings, with a ring of hemispherical knobs between each pair. A good example from Ireland was found in a bog near Loch Gur (Limerick), and is now in the Royal Irish Academy's collection.[2]

There are two other shields in the same collection which call for special notice. One of these is of alder-wood, and was found at Annandale (Leitrim). When it was taken from the bog where it was found, it measured 2 feet 2½ inches in length and 1 foot 9 inches in breadth, but it became shrunk and distorted when the wood dried. In the centre is a hemispherical boss surrounded by seven raised ribs, the outermost single, the other six grouped in pairs. The curve of these rings is not continuous; a U-shaped indentation breaks all of these ribs at one side, as though they had at some time been soft and a finger had been drawn over them.

The other shield is from Clonbrin (Longford). It is a thick disc of leather, 1 foot 8½ inches by 1 foot 7½ inches in diameter. There is a central hemispherical umbo laced to the shield with leather thongs, to protect the owner's hand, which grasped a leather handle also laced to the shield, and lying in the diameter

[1] See the frontispiece to the *British Museum Bronze-Age Guide* (2nd edn., 1920). Another British example is figured in PRIA xv p. 277, and one from Scotland in JRHAAI xiv p. 487.

[2] Illustrated in JRHAAI xii p. 118, and in PRIA xv p. 155, and plate viii—in each case accompanied by a description by Mr. Maurice Lenihan. See also IPCT p. 173. A smaller specimen, now in the British Museum, said to have been found with a large spear-head in an earthen fortification near Athenry (Galway) is figured in Kemble's *Horæ Ferales* (London 1863) plate xi. There is some doubt as to the provenance.

of the boss. Surrounding the boss are three raised concentric oval ribs, which follow the curve of the margin of the shield, and intercept between them small raised knobs, grouped in threes. These ribs are not complete rings. The innermost is open at one side, and the others break the continuity of their curves with abrupt V-shaped bends, which fit into one another and into the opening in the innermost ring.[1]

Various interpretations of this breach of continuity in the ornamental rings on shields such as these have been given. The feature is by no means confined to Irish shields; it is common, we might almost say normal, in examples that have been found on the Continent. Armstrong cites two explanations, neither of them satisfactory: Déchelette's, that the breach of the ring is in some way connected with solar symbolism; and Undset's, that it was made in order to imitate some celebrated shield, which had suffered injury in war.[2] This latter must be described as a fantastic hypothesis. A shield that so far failed in its *mana* as to permit itself to suffer any such injury would not be likely to be an acceptable model for copying. More probably are we to see the influence of the wide-spread superstition against wearing knots, or complete rings, in garments[3]; or—a simpler explanation—these gaps may be vestigial organs; all that remains of an observation-notch, at one time left in the shield to allow the fighter to look out to see what is going on, with as little risk to himself as possible.

Chapes in the Fifth Period are of larger size than those of the Fourth, and they have bars projecting from the sides which gives the object, roughly speaking, the shape of an inverted T (Fig. 5 *g*). These bars are not mere ornaments; they served the useful purpose of giving a purchase to the foot of the owner, if for any reason the sword was too tightly wedged in the scabbard and difficult to draw.[4]

Razors (Fig. 4 *j*) consist of delicate blades of bronze, mounted on a stem. They may be either single or double-edged—the latter is the more frequent.[5] They are usually of small size: it is hard to believe that they were very effective for the purpose suggested by their name: but the find at Cromachs described above shews that their owners were as careful of the edges as any owner of a modern steel razor could

[1] See E. C. R. Armstrong, "Prehistoric leather shield found at Clonbrin, Co. Longford," PRIA xxvii p. 259. The alder-wood shield is also figured in this paper. For the latter see also Wilde in PRIA viii p. 489. The illustrations are reproduced in IPCT pp. 171-2.

[2] JRSAI liv p. 122: and references there.

[3] On which see Sir J. G. Frazer, *Taboo and the Perils of the Soul*, p. 293.

[4] See Wilde, *Catalogue* p. 461 Fig. 338. [5] *Ibid.* p. 549 Fig. 433.

be. The Cromachs example was protected from injury by means of a leather case.[1]

Cupped bracelets, as they may be provisionally called, are the principal gold ornaments of the Fifth Period. This type of object may be generally described as an oval open ring of gold, with the ends usually—not invariably—terminating in a conical expansion, which is either solid or hollow. The solid expansions are always of small size. Armstrong has distinguished five types of these objects,[2] which may be briefly described as follows :—

1. Crescent-shaped bow (like the bow of a " leech " fibula) ; expansions not cones but *discs*, set at an angle on to the other, and attached to the bow at the edge next to this angle. In a few there is a small loop on the outer surface of one of the discs. The bow is usually ornamented with longitudinal grooved striations.
2. Crescent-shaped bow, with cup-shaped conical expansions. The bases of the expansions lie on a plane, and can be set horizontally as on a table ; but the attachments of the bow are not vertically over the centres of the bases, the expansion being in section a scalene triangle. Some of the largest known examples belong to this type ; one, from Castlekelly, Roscommon, in the Royal Irish Academy collection, measures 11 inches across, and weighs over 16 oz.
3. Bracelet-like objects, with slender oval bows, uniform, not crescentic in shape ; cup-shaped terminals, set centrally to the ends of the bow, but with the bases at an angle to each other, and therefore not capable of being placed standing on a horizontal plane.
4. Similar to the last, but with solid conical expansions.
5. Small crescentic rings, usually about 1 inch in diameter, without expansions at the ends ; resembling the first type, but without the flat discs : often described as " ring money ".

There are two specimens in the Royal Irish Academy collection of *straight* rods of gold having expansions at the ends. There are probably objects of the kind under discussion, requiring only to be bent into the curved shape to be completed.[3] The bars were not always solid ; sometimes they were hollow, and during the process of manufacture they were filled with tightly-packed sand or clay in order to prevent them from being crushed when the object was in process of manufacture.

It is extremely difficult to find a common purpose which will explain all the objects of this form. Some of them may have been bracelets : but others would not fit upon any human wrist, and at best the terminal expansions would have been nothing but an inconvenience. Others might have been dress-fasteners, the expansion being intended as a button, to be

[1] See IPCT pp. 169, 176.
[2] *Gold Catalogue* p. 30. See also Wilde, *Gold Catalogue* pp. 53-65 and IPCT pp. 177-8.
[3] A good photograph of one of these will be seen in JCHAS Series II vol. xiii p. 118.

slipped into a loop sewn on to the garment; but the larger and heavier objects of this class would have been impossibly clumsy, and those with small expansions would not catch into the loop. A recent writer has very properly protested against the custom of calling these objects "fibulæ,"[1] which is the one thing that they *certainly* are not. He is less happy, so it seems to me, in suggesting that they should be called "grips" (a name suggestive of an American hand-bag) and in drawing analogies between them and the ancient Scandinavian oath-rings, such as are mentioned in Eyrbyggja-saga and elsewhere in old Norse literature. We really do not know what the oath-rings were like: nor do we know if their use extended back to the Bronze Age in Scandinavia, or if it was current at all in Ireland. Some of the rings are so small that they will not admit even one finger, much less two; and what a habit of swearing the folk of the fortress of Moghane must have had, if they needed all of the hundred and thirty or so of "oath-rings" that were found in the neighbourhood of their ancient stronghold!

It has been further suggested that these objects were a medium of currency. This is the most probable explanation that has been put forward; and it is certainly a remarkable coincidence that objects of precisely similar form, but of bronze, have been used as currency in West Africa from at least the sixteenth century. But if this be the true explanation we ought to find the weights of these objects fitting into some definite metrological scheme; the long series of weights which are given in Armstrong's *Gold Catalogue* will not do so, unless we assume a margin of error so large as to make the metrology of the objects useless. But possibly different parts of the country used different standards. A bronze ring of the fifth type overlaid with gold—suggestive of ancient forgery—is described in JKAS i p. 322. See also, for further examples, the same Journal, v p. 96: and several others are recorded in Armstrong's *Gold Catalogue*.

A few specimens of this kind are ornamented, some of them elaborately so, with engraved lines. An unusually fine example preserved in the Library of Trinity College, Dublin, decorated with a diaper of concentric circles, is figured by Wilde (*Catalogue*, p. 60). One specimen figured by Vallancey bears fanciful symbols upon one of the cups, and five Ogham letters upon the other; but these embellishments must be dismissed as forgeries. Another large and highly-decorated specimen was found at a place called Parkanore (Tipperary) in about the

[1] In a review of Armstrong's "Gold Catalogue," in *Antiquaries' Journal* i p. 70.

year 1858, but was melted down, and its precise character is unrecorded.[1] A specimen contained in a wooden box made for receiving it—formed of a block of wood with a hollow of the appropriate shape cut in it, and fitted with a movable lid—was found early in the nineteenth century in Co. Tyrone, and remains in private possession in Co. Cavan.[2]

Objects of this class formed the bulk of the famous Clare find of 1854.[3] This was a great hoard of gold objects, weighing collectively at least 175 ounces,[4] and thus the largest collection of gold objects as yet found in Northern Europe. It was uncovered by labourers engaged on laying the line of the West Clare Railway, and consisted of a large number of cupped bracelets of the third type; some gorgets; a large closed ring with a smaller ring suspended to it; one (or more) of the conical side-slotted objects described below; and a "crown" of 10 to 12 points from 4 to 5 inches high. All but a very few of these objects were sold for their gold and were melted down; casts of 150 of them were preserved. These objects were found near the great fortified settlement of Moghane, and it is conjectured that they may have been the loot from an ancient raid of which it was the victim.[5]

Vallancey figures[6] a curious object found in Cullen Bog (Tipperary)—a locality that yielded many gold ornaments early in the eighteenth century.[7] The object in question looks like a cup broken from a bracelet of the second type, but it is not broken; where the attachment with the bow would have been, there is a small perforation, surrounded with a simple

[1] JKAS v pp. 351, 445.

[2] An interesting study of the manufacture of these objects, from the point of view of a practical goldsmith, will be found in a report by Mr. Edmond Johnson, appended to a paper by Dr. W. Frazer, "On five gold fibulæ lately discovered in the South of Ireland, and on the processes used in their manufacture," PRIA xix p. 776, and in a supplementary note by the same author in PRIA xxi p. 336.

[3] E. C. R. Armstrong, "The great Clare find of 1854," JRSAI xlvii p. 21. This article supersedes all the previous literature on the subject, and has a complete collection of illustrations of all the objects known to have been included in the find. See also the same writer's *Gold Catalogue*, p. 14.

[4] This is in round numbers the sum of the weights of the recorded objects. Nothing is known of the weights of such objects as have been lost.

[5] Moghane Fort was first described adequately by Mr. Westropp, PRIA xxvii pp. 218-25. Its maximum cross dimensions are 1512 by 1118 feet; it consists of a triple rampart of stone, with a number of smaller circular enclosures contained within the two outer walls. The innermost enclosure measures 363 by 386 feet. The outer wall has a circuit of about 4400 feet; outside it there is a trench, part of which is quarried in the rock. It is, in short, one of the most important prehistoric fortifications in Europe; and if (as is reasonable) we may associate the great hoard of gold found in its neighbourhood directly with it, its date can be fixed with unusual precision to about 500 B.C.

[6] *Collectanea de rebus hibernicis*, vi p. 258 plate xvi: reproduced IPCT p. 142.

[7] A list of these, copied from *Archæologia* vol. iii, is given by Vallancey, and reproduced in IPCT p. 119.

linear ornament. There is also a zigzag ornament, not found on objects of this type, surrounding the rim of the cup on the convex side. It may be conjectured that this object was one of a pair that were secured together by means of a cord, not of the usual metal bow.

A peculiar ring of the fifth type described as being built up of alternating plates of white and yellow gold, soldered together after the manner of the voussoirs of an arch, is reported in JKAS v p. 398. Confirmation of such a find, and evidence of its authentic antiquity, would be desirable. The object itself is no longer forthcoming.

A unique series of golden *balls* was discovered early in the nineteenth century near Carrick-on-Shannon (Leitrim), by men digging potatoes near an old fort on the west bank of the river (and therefore actually in Co. Roscommon). They are each made of two hollow hemispheres [1] of thin gold plate, with the edges fitted together so as to overlap, and then soldered; holes are formed in each for passing a string through them, and the edge of each hole is turned back to prevent it from fraying the string. They are graduated in size, so as to form a symmetrical series; but as they measure approximately from $2\frac{3}{4}$ to $3\frac{3}{4}$ inches in diameter, it is hard to believe that they formed part of any human being's personal decoration. Most likely they were made into a chain for suspending from the neck of a horse. Eleven [2] of these balls were found; seven are in the Royal Irish Academy collection, one in the British Museum, and one is known to be in private hands.[3]

Bullæ.—These may be noticed here, though the date to which the Irish examples are to be assigned is very uncertain. One is alleged to have been found in association with fifth-period bronze-age objects: another with an eleventh-century shrine: clearly these two examples cancel each the other's evidence.[4] They are heart-shaped or crescentic objects, consisting of a core of lead or clay, overlaid with gold bearing linear ornament upon it; at the upper edge there is a perforation or a tube for receiving a suspension-cord. The ornamentation is bronze-age in appearance, and none of them bear any characteristically Christian symbol or ornament. One of these

[1] The word "hemisphere" is used loosely for convenience; the balls are really oblate spheroids.

[2] A letter from the Lord Leitrim of the day, quoted by Coffey in the paper cited in the next footnote, gives the number at thirteen; but this is probably an error due to a lapse of memory.

[3] "Ancient Gold Balls," *Dublin Penny Journal*, 1 November 1834: Wilde, *Catalogue* ("Gold objects") p. 34, reproduced IPCT p. 183: Coffey, *Bronze Age in Ireland* p. 65: *Idem*, "Two unpublished lunulæ and other objects," PRIA xxx p. 449: Armstrong, *Gold Catalogue* p. 37.

[4] E. C. R. Armstrong, in JRSAI lii p. 134.

objects is described as containing earthy matter mixed with "small irregular-shaped particles having a brownish-red colour, which are probably altered blood globules". On this an enthusiast commented thus: "This leaves no doubt concerning the use of this reliquary; the contents may be the blood of a martyred saint, mixed with the earth on which it was spilled."[1] What is *probable* leaves *no doubt:* what leaves no doubt *may be* so. Such is the logical sequence that ends in calling an object containing no marks of Christianity whatever "a reliquary"!

The hoard of gold objects known as the "Strangford Loch Find" was fully described by the present writer in a paper presented to the Royal Irish Academy.[2] It is sufficient to give here these simple references, in view of the widespread suspicion as to the authenticity of the "find". The author preserves an open mind on the subject, but admits that confirmatory discoveries would be desirable.

Other gold objects may be more summarily mentioned. *Gorgets* seem to be developments of lunulæ: they are of the same general shape, but are much larger, and are decorated over the whole surface with punched and repoussé ornament of ribs, dots, and cord-work. A circular disc of gold, formed separately, is secured, by stitching, to each of the pointed ends; this disc is about 3 inches across, and has similar ornamentation upon it. The type is not very common, and the date of these objects is uncertain, though doubtless it is comparatively late —either of the end of the Bronze Age or of the Hallstatt period.[3] *Collars* resemble in appearance the cupped bracelets, but are of larger size. They are lunate strips of gold, curved so as to be concave on the side turned toward the wearer:[4] a cup or cone terminates the points, as in the cupped bracelets. Of *ear-rings* there is a considerable variety; a favourite type is an oblong strip of gold with a hook rising from one of the longer edges, so that the ornament hangs with its long axis horizontal. *Beads* are not uncommon: the usual shape is a double cone. There is a remarkable type of ornament the nature of which it is difficult to determine. It is of about 1½ inch in diameter, in shape a rather low *double cone*, perforated with a round hole along the axis, and with a rectangular slot cut in one side. How it was worn is as yet a matter of conjecture only.[5] Small cylindrical *boxes* of gold have also been found, with circular

[1] Quoted in Armstrong, *Gold Catalogue* pp. 43, 44.
[2] PRIA xxxii p. 176. See also IPCT p. 151 ff.
[3] Armstrong, *Gold Catalogue* p. 13.
[4] Specimens are figured in Armstrong, *Gold Catalogue* plate xi.
[5] For illustrations see Armstrong, *Gold Catalogue* plate xviii Figs. 401-10.

discs forming the top and bottom, and the side formed of a strip of the metal—after the manner of a large pill-box.

Plain bronze rings are not uncommon in Ireland; it is difficult to say what they were intended for. They were cast in a complete circle, unbroken, so that they cannot be chain-links. That they belong to the Fifth Period is shewn by a hoard found in Co. Westmeath, in which twenty-four of these objects were associated with a socketed axe-head, and by another from near Scotstown (Monachan) where a number of broken specimens were discovered along with two gold cupped rings.[1]

Beside single rings, combinations of bronze rings are known. Thus, Armstrong[2] figures a find from Brockach (Westmeath) which contained seventeen single bronze rings, from about 1 to about 4 inches in diameter, as well as two pairs of rings rigidly attached together like the loops of a figure of eight or the lenses of a pair of spectacles. Some of the single rings shewed evidence of having originally formed part of similar pairs that had broken apart. There was also a cupped bracelet in bronze. This is rare; there are only twelve bronze specimens of this form of ornament in the Royal Irish Academy's collection as against 105 in gold. There was, further, a large bronze ring upon which a small bronze ring was strung. Wilde figures a similar ring with two small rings playing upon it.[3]

The pairs of rings must be regarded as links from some garment constructed like the mediæval chain-armour. Groups of three rings, rigidly secured together in a straight line, are used in the most elaborate combination of these rings yet discovered, a collar (?) found near Roscommon, and now in the Royal Irish Academy's collection.[4]

Another form of bronze ring is illustrated by a pair from Trillick (Tyrone),[5] and another from Glenstal (Limerick).[6] They consist of rings of bronze with lateral holes opposite each other, pierced through the side, so that a bronze pin will pass diametrically through the ring. In some cases—the Glenstal pair are specimens—there is a small trumpet-shaped projection protecting the outer surface of these openings. As the Trillick rings were found associated with a bronze pin, it has been conjectured that they were used in some way for securing the pin and preventing it from slipping. In any case,

[1] E. C. R. Armstrong, "Two Irish bronze-age finds containing rings," *Antiquaries' Journal* iii p. 138.
[2] E. C. R. Armstrong, "Some Irish bronze-age finds," PRIA xxxvi p. 134, esp. pp. 144-5.
[3] *Catalogue* p. 570 Fig. 480. [4] *Ibid.* p. 576.
[5] Evans, *Ancient Bronze Implements* pp. 398-9.
[6] Armstrong, *op. cit.* p. 147.

all these rings were connected with the fastening or the decoration of garments.

We have already mentioned *Goldsmiths' Hammers* in stone. A few hammers and anvils of bronze are recorded. The hammers are socketed; they resemble small socketed axe-heads with a flat striking surface in place of a cutting edge. The anvils are discs or cubes of bronze, with a flat upper surface, and with a spike below whereby the anvil could be thrust for steadiness into a heavy block of wood. There is some variety in the patterns of both classes of instruments [1] (Fig. 5 *e*).

Characteristic of the Fifth Period is a large *pin* (the so-called "sunflower" pin), for securing garments. This has a flat, circular head, sometimes, though not always, rising as a cone in the centre, and decorated with engraved ornament. The stem of the pin is usually, but not always, bent to a right angle just under the head, so that when the pin was in position in the garment, the ornamental head would shew as a flat vertical disc.[2]

Silver is found in Ireland, though in limited quantities. It does not seem ever to have been used as a decorative material before the time of Christianity: references in Irish literature to the use of silver ornaments at an earlier period must be dismissed as anachronistic interpolations. It is, however, sometimes found by analysis in combination with gold; but whether the silver is present as a natural impurity, or has been artificially added to make an alloy like the classical electrum, is open to question. Mr. E. A. Smith has found from 18 to over 24 per cent. of silver present in certain Irish gold ornaments.[3] But all silver torques and other bronze-age types which have been found and reported from time to time rest under grave suspicion.[4]

Moulds

A few words are all that are necessary on the general subject of moulds. Naturally, those that survive are for the greater part of stone; but clay moulds were in use, and indeed were most probably commoner than moulds of stone. Some fragments of clay moulds for casting swords were found

[1] See *Proceedings Soc. Antiqu. Lond.*, Series II vol. ii p. 66: Wilde, *Catalogue* p. 523: IPCT p. 169.

[2] British Museum *Bronze Age Guide* p. 104.

[3] E. A. Smith, "Notes on the composition of ancient Irish gold and silver ornaments," PRIA xix 733.

[4] This statement as to the late use of silver in Ireland can be verified by reference to Wilde's "Catalogue of the silver and ecclesiastical objects in the collection of the Royal Irish Academy," edited by Armstrong PRIA xxxii p. 243.

in a mound at a place called "Old Connaught," near Bri Chualann (Wicklow), and are illustrated by Wakeman.[1]

Stone moulds were made of hard, close-grained stones. The face in which the matrix was sunk was rubbed smooth, in order that it might lie true with the companion half of the mould. The fitting of the two halves was accomplished with great care and skill; sometimes tenons in the one half fitted into mortices in the other, in order to make sure that the moulds were properly adjusted. On the whole, this is an exceptional feature. Occasionally bad castings are found, in which the two halves of the mould have not been fitted together with rigid accuracy. A very well-made mould, with mortices and tenons, and with in addition a groove by which a binding thong could be secured round the two halves, keeping them together, is illustrated in JKAS vii p. 307.[2] It was intended for the manufacture of socketed axe-heads of a highly ornamental character. When the mould was intended for casting one single object, the matrix occupied the middle of the smooth face; but sometimes there are matrices for more than one object. When these are on one and the same face, they may reasonably be regarded as contemporary, and as affording evidence of the contemporaneity of types of objects; but when they are on different faces, the possibility has always to be admitted that an old moulding-stone might have been discovered and used at a later time for casting tools of a different and later type. Wilde (*Catalogue* p. 91 Fig. 72) illustrates a mould with a hollow for casting a flat axe-head and another for one side of a palstave. These two can hardly be contemporary. Channels are left for admitting the molten metal to the hollow; and there are often fine grooves cut across the surface of the mould to allow air to escape from the hollow, and so to prevent the casting from being weakened by the formation of bubbles.

Pottery

Stone-age pottery is excessively rare in Ireland. Only two pieces exist in the great Royal Irish Academy collection. The better of these was purchased at the sale of the Day collection; it is of the characteristic hemispherical shape, with rounded bottom, and adorned with the equally characteristic punctured ornament, made by means of a comb-like instrument.[3] It was found near Clones (Monachan).

[1] W. F. Wakeman, "On a recently-discovered pagan sepulchral mound in the grounds of Old Connaught, Co. Dublin," JRSAI xxv p. 106.

[2] Reproduced in IPCT p. 147.

[3] This specimen is figured in illustration of a note by G. Coffey in JRSAI xxxiv p. 273. There is a sketch of the other Royal Irish Academy example (from Dungore, Antrim) in IPCT p. 196.

Since the pioneer work of Thurnam, the bronze-age pottery of Great Britain and Ireland has been classified into four principal divisions: beakers, food-vessels, cinerary urns, and incense-cups. The names are not a little arbitrary, but they are convenient; the fourth is especially unsatisfactory, for it assumes too much. On the other hand, the small vessels of which this name is a label were certainly used for some ritual purpose in connexion with burial; only thus can we explain the fact that they are most frequently found inside the cinerary urn, resting upon the burnt bones which it contains.

Since Thurnam wrote, material has accumulated enormously, and Continental analogues have been discovered; and within recent years, as we write, the whole subject has been reviewed by the Hon. John, afterwards Lord, Abercromby.[1]

The bronze-age pottery of Ireland bears the same testimony as the bronze and gold objects of the same period. There is a decided contrast between the products of Ireland and Great Britain; as we have already remarked, *the one is an island of the Atlantic, the other of the North Sea.* The first point which we come across in a study of Irish pottery is also the most important, namely, the almost total absence of the *beaker*.

The beaker is a globular vessel with a tall neck of about the same height as the vessel itself. In the earliest form there was a distinct angle between the vessel and the neck, but later the neck and the body of the vessel pass gradually into one another by a continuous curve, so that the profile of the vessel is in the shape of a long narrow S. There are various subordinate varieties and types among the beakers of Great Britain, which, in the masterly hands of Lord Abercromby, have been shewn to be of the greatest importance in reconstructing the history of the introduction of the vessel. For these, and for a full series of illustrations, reference may be made to his monograph, cited above. The essential fact is this: the distribution of the types of beakers, and the nature of the osseous remains found associated with them in grave-deposits, shew that this form of vessel was introduced into Britain by a race of brachycephalic invaders, starting from the region of the Rhine, and entering the country at some point or points in the southern counties. They gradually made their way up through the country, carrying with them not only the custom of making beakers, but also the newly-introduced knowledge of bronze metallurgy.

Beakers are found over practically all South Britain, and over a considerable area of Scotland also—in some places

[1] Hon. John Abercromby, *A Study of the Bronze Age Pottery of Great Britain and Ireland and its associated Grave-goods*, Oxford 1912.

abundantly. But in Ireland they are all but totally absent. Only one specimen is recorded, now lost, and known to us only from the evidence of a rough woodcut.[1]

The only possible interpretation of this fact is the failure of the "Beaker People" (as they are conveniently termed) to penetrate into Ireland. A woman of the tribe might be captured from time to time in a raid, and being condemned to a servitude which included the manufacture of the domestic pottery, would naturally fashion her handiwork in the manner to which she had been accustomed. The importation of occasional specimens from abroad is less likely, for no one would trouble to import rude commonplace vessels of this kind, which would in any case be troublesome in view of the fragility of the goods and the conditions of early navigation. Metal objects may pass from hand to hand over a long stretch of territory; but pottery may always be presumed to have been made at or near the place where it is found; except in the case of such *objets de luxe* as painted Greek vases, which are never found in Northern Europe.

There is a second variety of beaker, not indigenous to the Rhineland region, but with a centre of gravity further west—in Spain. This is the so-called bell-beaker, a rather squat vessel, in shape resembling the article which gives it its name. Some fragmentary bell-beakers were found at Carrowmore (Sligo), which contribute their mite of evidence to the establishment of a primitive connexion between Spain and Ireland, also testified to by the Asturian flints and the stone at Clonfinloch, described below.

But it is not only in the absence of beakers that Ireland is seen to be an archæological province independent of Britain. The native type of *food-vessel* is peculiar to the country. It is a bowl in the shape of an oblate spheroid, quite obviously derived from a basket-work original. The pattern of the weaving is artistically reproduced; in fact, the ornamentation of this type of vessel is distinctly above the average of British bronze-age pottery.

Incidentally, this proves the existence of a skill in weaving for which we have not sufficient extant materials to study, owing to the perishable nature of the materials. But it is clear that the potters put forth all their skill to imitate the complex patterns which the basket-makers produced in their wares. The horse-hair fringe found with the late bronze-age deposit at Cromachs, mentioned above (p. 61) is practically

[1] Illustrating an article entitled, "Ancient Irish sepulchral urns" in the *Dublin Penny Journal*, 29 September 1832. The vessel was found in a carn at Mount Stewart, Down.

the only specimen extant of this ancient Irish art. It shews the possession of very high technical skill.

In the later phases of the Bronze Age there is much greater correlation between the pottery of Britain and that of Ireland. Specimens of most of the numerous varieties classified by Lord Abercromby can be produced from among Irish examples; and in the matter of technical skill and decorative treatment Ireland is to say the least not inferior to the neighbouring island.

Incense-cups, so called, are small vessels, which are usually found empty, lying upon the ashes inside a cinerary urn.[1] There is a considerable variety of form among the few that have been found in Ireland, where they are distinctly uncommon. While the name "incense-cup" is probably absurd, there can be no question, as has been said above, that these small vessels were used for some ritual purpose connected with burial.

A *corpus* of Irish bronze-age pottery is an important *desideratum* for the student of the prehistoric period in the country. At present the material has to be gathered together from a large number of sources, and, owing to the multiplicity of books and volumes which have to be consulted, comparison and classification is next to impossible. For example, we are as yet unable to say whether there are any provincial peculiarities in the forms or the decoration of the vessels. This study must be a task for the future.

Cinerary urns are far from common in comparison with the smaller pots grouped together under the generic name of food-vessels. In fact, perhaps more often than not, a "food-vessel" was used for the purpose to which the cinerary urn is supposed to have been appropriated. There is much less decoration on the surface of cinerary urns than on food-vessels; moreover, the decoration is of a different type. It frequently consists of rope-like strips of pottery, modelled separately, and affixed to the surface of the vessel while it was still soft. One of the finest cinerary urns found in the country was discovered at Newry; it is now in the Belfast Museum. This superb vessel is just a little under 2 feet in height.[2]

It is unnecessary to say that in no case is the bronze-age pottery of Ireland wheel-made. The vessel was modelled freehand out of a lump of clay. The larger vessels were built up of flat "pats" of clay, modelled between the hands and then built up together. When the baking has been imperfect, the outlines of these constituent discs are clearly visible.

[1] Good examples of this are reported in JKAS i p. 136: JRHAAI xv p. 741.

[2] It is illustrated in Wood-Martin, *Pagan Ireland* p. 327, and on a post-card published by the Museum.

To enumerate the types and the varieties of decoration on Irish bronze-age pottery would take up far more space than we can here afford. Numerous illustrated articles on the subject are to be found scattered through the proceedings of societies.[1] Only a few of these will suffice to give an idea of the bewildering variety which the subject presents.

Trade

The evidence for early trade in any country lies, first, in the discovery of native products abroad, and secondly in the discovery within the country of objects of foreign provenance.

We have already seen that Irish gold must have been an important material of trade in the Bronze Age, and that Irish gold ornaments, especially lunulæ, are found in various places on the Continent. The evidence from the distribution of flat copper axe-heads is less conclusive, but it is present, for what it may be worth. What other commodities Ireland may have exported at this early date we cannot say. The trade in wolf-dogs, for which there is some evidence in the *Confessio* of St Patrick, can hardly have already begun. But the presence in the country of objects, or rather of materials, of foreign provenance shews that relations abroad were actively maintained: and as these goods would have had to be paid for in some way, we may presume that Irish goods were exported, although little direct evidence remains to us as to their nature.

The foreign commodities which we can trace in Ireland are tin, amber, and jet. Tin was probably imported from the possibly Irish colony in Cornwall, ready compounded with copper; there is no record of any find in the country of pure tin, in ingot or industrial form. How far amber and jet were imported as raw materials and worked up into ornaments in Ireland itself we have no means of knowing. The jet necklaces found in Ireland are identical in type with those from Scotland, as inspection of the illustrations published by the late Joseph Anderson will shew.[2] This is suggestive of importation from some common centre.

Amber is usually found in the form of beads, sometimes of considerable size, of a flattened spheroid shape. Hoards of beads have sometimes been found, evidently the relics of necklaces from which the string has rotted away. The beads in such hoards are usually of graduated size. It is rare to find

[1] A representative selection will be found illustrating IPCT chapter v. See also Wilde, *Catalogue* pp. 177-83.

[2] See Joseph Anderson, *Scotland in Pagan Times: Bronze and Stone Ages* (Edinburgh 1886) pp. 55, 56.

amber beads in such associations that they can be exactly dated: they are not necessarily all of the Bronze Age. Coffey reports a find from Mount Rivers (Cork), in which a few beads of amber were found associated with fifth-period objects;[1] there was a similar find made at Banacher (Offaly) at a later date, where a magnificent amber chain was found associated with one or more cupped bracelets.[2] This find is also now in the Royal Irish Academy's collection.

Probably the greatest hoard of amber found in the country was a collection of about three hundred beads, globular, discoidal, and cylindrical, found in a bog at Whitegates, near Kells (Meath). Close by were the remains of an ancient causeway.[3]

There is a wider variety of ornaments in jet. It is usually found in the shape of beads, which may be ovoid (as in a set of ten large beads found at Cullahill (Leix), now in the possession of the Royal Society of Antiquaries of Ireland[4]), cylindrical, or flat. Jet necklaces are sometimes made of several strings, kept in position by cross-pieces at intervals; these are usually decorated with simple engraved linear patterns. A triangular pendant sometimes hangs from the middle of the necklace.[5]

Bracelets of jet are also sometimes found; they are usually quite plain, and of rather clumsy size. But the date of these objects is problematical.

Social Organization: Dwellings

The people of the Bronze Age in Ireland were in all probability cognate with the Picts of Scotland, and were organized in the same way. Now, we have evidence that the social system of the Picts was very different from that of the Celtic-speaking population. I use this linguistic basis of differentiation intentionally: we have a few inscriptions from regions formerly occupied by the Pictish people, and therefore presumably in the old Pictish language, still remaining in Scotland; and not one of the heroic efforts that have been made to explain them as Celtic has contributed the smallest atom of value to the problem of their decipherment. The Etruscan and the

[1] G. Coffey, "Recent prehistoric finds acquired by the Academy," PRIA xxx p. 83.

[2] Described by Armstrong in *Proceedings Soc. Antiqu. Lond.*, II xxx p. 237 ff.

[3] *Reliquary and Illustrated Archæologist* iii p. 51.

[4] JKAS i p. 30: W. Frazer, "On jet beads found in Ireland," JRSAI xxii p. 221.

[5] As in the Scottish examples, above quoted. See, for an Irish example, the necklace from a cist at Oldbridge, Co. Meath, published by Coffey in PRIA xix p. 751. Some specimens of amber and jet ornaments are figured in IPCT pp. 190-2: Wilde, *Catalogue* p. 241.

Cretan inscriptions will be interpreted long before we have discovered what the Pictish inscriptions mean, so utterly lost is the language in which they are written.

The Pictish social system was an *exogamous matriarchate*. We learn this from various sources of information. Bede [1] was puzzled by it, and sought to explain it. The Irish historians who drew up the *Book of Invasions* were likewise driven to seek in folk-lore a reason for a system so foreign to their own. Especially is it confirmed by the *Pictish Chronicle* itself, which shews clearly that the Pictish kings were succeeded, not by their own sons, but by their sisters' sons: and further, that the fathers of the kings were for the greater part foreigners, as befitted an exogamy.[2]

The conclusion is confirmed by other traditional evidence. It is remarkable that women play an undue part in the traditions of the foundation of such early bronze-age sanctuaries as Tara, Tlachtgha, Emhain Macha, etc.: and that women figure largely among the leaders of the early legendary invasions.

It may also be supposed that communities were further differentiated by totemistic classifications. When we read that a king was the son of a woman who was wooed by a suitor in the form of a bird, in consequence of which he was throughout his life debarred from hunting birds, the inference is plain: he was a member of a bird totem, and the story has grown up at a late date when the nature and restrictions of totemism were being forgotten. Many of the "population-groups" of ancient Ireland were called after animals, fire, the ploughshare, and other things which are pressed into the service of totemistic heraldry elsewhere. But on these matters we have very little direct light from Archæology, and while we cannot wholly pass them by, we cannot dwell upon them in a work like the present.[3]

Closely bound up with the subject of organization is that of dwellings. A community of people living together in a common residence must necessarily be organized upon some basis, be it that of a family or of a club.

From the beginning down to early modern times Ireland was densely forested; so that timber provided the most obvious material for buildings. Stone construction, indeed, does not appear in other than a rudimentary form until the Christian centuries are well advanced. In consequence we

[1] *Historia Ecclesiastica*, I i.

[2] See the *Pictish Chronicle*, printed in Skene's *Chronicles of the Picts and Scots*, and Professor Zimmer's analysis under the name *Das Mutterrecht der Pikten*, which we have already had occasion to quote on a previous page.

[3] For a slightly fuller discussion of these matters reference may be made to IPCT p. 236.

are not in a position to describe the old Irish house with any security. All the chief houses have vanished, leaving nothing but foundation-mounds. The descriptions of houses, which are occasionally to be found in the romantic literature, are vague, and are often unintelligible owing to the presence of technical terms of which we do not know the meaning; and in any case we could not with assurance argue back from conditions in the historic Iron Age to those in the prehistoric Bronze Age. A few shore-dwellers' huts, or rather their foundations, have been found at Whitepark Bay: these are small circular constructions of dry stone, resembling the "Bee-hive huts" of later days.[1]

On Carrowkeel Mountain (Sligo) the party of the Royal Irish Academy exploration committee which investigated the burial carns (described below) discovered the remains of a remarkable settlement. This consisted of forty-seven circular walls, enclosing spaces of from 20 to 42 feet in diameter. These were probably protection-walls, erected to shield from the weather huts erected within them, and made of flimsier materials.[2]

A number of the earthen ring-forts may very well be of the Bronze Age: but if so we have not yet discovered any criteria by which they can be certainly distinguished from those of a later time, and it is best to postpone to the following chapter anything that we may have to say on this subject.

Art

The art of the Bronze Age is manifested in the decorative ornament applied to metal objects such as bronze axes and gold lunulæ, and also to pottery: and in the rock-sculptures, of which Ireland possesses a fair number.

Of the former we have already spoken: we therefore speak here of the sculptures.

Among these, there is one monument which stands out conspicuous above the rest, being distinguished by its unique character. This is a slab lying on a hill-side near the small village of Clonfinloch (Offaly). It was first described by Rev. James Graves,[3] who tells us that it was locally called "The Fairy Stone," and that a mysterious horseman was alleged to ride around it from time to time. It measures 9 feet 9 inches

[1] See JRHAAI xvii p. 107.

[2] This settlement is described in PRIA xxix p. 331.

[3] James Graves, "On a boulder with presumed pagan characters at Clonfinlough, King's Co.," JKAS vii p. 354: M. C. Burkitt, "Notes on the art upon certain megalithic monuments in Ireland," *Jahrbuch für prähistorische und ethnographische Kunst*, Leipzig 1926 p. 52.

in length by 8 feet 3 inches in breadth. The sculpturing entirely covers the flat upper surface; it is, as it were, divided into two compartments by an imaginary line; on one side of the line there are cup-marks, figures resembling crosses, and depressions in the shape of foot-prints. On the other side there are several repetitions of a figure resembling the Greek letter Φ. It is not surprising that Graves, writing in the early sixties of the last century, took this symbol for a representation of a penannular brooch, which it much resembles. We must not chide one who in his day rendered unwearied service to Irish archæology for ignorance of facts that at the time were not available, and for his failure—which the very title of his paper betrays—to appreciate the great importance of the monument.

So far as I am aware, no other explanation of these sculptures was offered down to the year 1920. Indeed, it is hardly too much to say that archæologists had lost sight of the stone altogether. In that year M. l'Abbé Breuil, during a visit to me in Dublin, shewed me some photographs of his most recent discoveries of Neolithic wall-paintings in Spain. I suddenly remembered the excellent lithograph of the Clonfinloch stone in the Kilkenny Society's *Journal*, and taking the volume down from my shelves, I placed it beside the photographs. My visitor at once agreed that there was an identity of style and purpose in the Irish stone and in the Spanish paintings, and that the two were undoubtedly cognate. This was confirmed by a subsequent examination of the stone itself, which we made together. These Spanish analogies enable us to identify the Φ-shaped characters as *men*, with the arms looped at the sides in the attitude called "a-kimbo". The sculptor desired to represent a number of men on one side of the engraved stone surface, some of them apparently holding weapons. The cross-like figures may also represent men: it might be thought that the Φ convention, once established, would have been carried out consistently, but this is not borne out by the Spanish analogies, in which different forms of convention are used simultaneously. The weapons seem to be halberds—another link between Spain and Ireland—though as the Spanish analogues are Neolithic we may have to regard the Clonfinloch stone as Neolithic also, in which case the weapons must be considered to be stone axes. (See Plate I Fig. 1.)

Adopting this explanation of the characters on the stone, it is hardly too far-fetched to see in this sculpture a record, easily the oldest record of the kind in Northern Europe, of a historical event. The men contemplating the sculptured field are victors in some encounter: before them is the battle-field, printed with the foot-marks of the flying foe, strewn

with weapons cast away in their flight and with missile stones —or possibly with severed heads. It is, however, more likely that the engraving was executed before the engagement, the purpose being less to preserve a record for posterity than to secure the victory by magic—the medicine-men having prepared for their occult purposes a picture of the consummation desired. They may, for example, have prodded the footprints with sharp-pointed stones in the hope of laming their enemies, just as a modern Australian puts a fragment of broken glass in his enemy's track for the same benevolent purpose. It may even be that the local legend of the horseman, who periodically rode around the stone, may be a last lingering recollection of the processions that were made about the stone as the wizards sang their incantations. But whether the sculpture was executed before or after the battle; whatever may be the purpose for which it was prepared; whether the guesses at its meaning which we have offered are correct or wildly off the mark, the stone is a monument of history beyond all price. It teaches us that even before the Stone Age came to an end, some sort of relationship—not necessarily friendly—had been established between Ireland and Spain. It is strange that the old Irish historians, basing much of their work on what they learnt from the compilation of the Spaniard Orosius, bemused, moreover, by the similarity between the two names *Iverio* (afterwards *Hibernia*), and *Iberia*, ever hankered after Spain as the land of origin of some of the invasions whose weird legends they collected and wove together. We can hardly dare to call this anything more than a coincidence: yet it is not inconceivable that scraps of far-off tradition had floated down to their time, and had created all unconsciously to themselves a bias which affected their attempts to reconstruct the history of their ancient land. It is impossible for us, who have to be content with garnering a few perishing scraps of popular tradition, to conceive of the strength and activity of folklore when the ancient historians worked 1200 or 1300 years ago.

The sculptured ornament which is associated with the Bronze Age is of a nature totally different from that which we see on the unique stone of Clonfinloch. Limitations of space will not permit us to discuss fully the bronze-age sculpture of Ireland, a subject which calls for a monograph to itself: in such a monograph the relations of Irish ornament to contemporary art elsewhere in Ireland would have to be considered with a fullness of detail that would here be impossible.[1]

[1] I am permitted to mention that such a monograph is in existence in manuscript, but that its publication is delayed pending the result of some further research.

FIG. I—THE CLONFINLOCH STONE

FIG. 2—DOLMEN OF UNUSUAL FORM, ARAN MÓR (GALWAY)

In the preceding paragraph we have used the word "ornament". But it is not at all certain that this is the proper word to use. Let us glance back for a moment at the decoration of lunulæ, pottery, and other objects that have been described earlier in this chapter. This ornament consists entirely of abstract geometrical figures; no natural forms, borrowed from the animal or the vegetable world, are pressed into the service —the sherd of an urn from Macroom (Cork), with what has been taken for the figure of a branch of a tree wrought upon it,[1] cannot be cited as an exception. The decoration of metal objects consists of combinations of rectilinear figures, and the ornament, like most ornament, is rhythmical, the pattern being formed of elements repeated at regular intervals.

This rhythmical element is all but entirely absent from the bronze-age sculpture. It is found in one or two stones in the tumulus of New Grange, and there attracts attention by its exceptional nature. Elsewhere, bronze-age sculpture consists of isolated figures, scattered at random over a surface of stone. This cannot be called ornament; rather is it a violation of the first principles of ornament. The spiral figures in the tumulus of New Grange have very naturally been compared to the spiral figures in the *tholos* tombs of Mycenæ and Orchomenos, which resemble New Grange so closely in plan and purpose; but notwithstanding the two are essentially different. In the Mycenæan tombs the spirals form rhythmical ornamental patterns, and cannot be supposed to have any more recondite meaning. In the Irish monument rhythm is entirely absent from the treatment of the spirals, although the metal objects of contemporary date shew that rhythm as an essential element in ornament was clearly understood in the country. The two groups of monuments cannot therefore be set side by side without very considerable reserve; and the deductions that have been drawn from such comparisons, as to the date of the Irish monument and the formative influences that acted upon it, are, to say the least, extremely uncertain.

The figures sculptured upon the rocks and stones of Ireland must surely be treated as *symbols* rather than as ornaments. No one would take the trouble merely to ornament a casual stone standing in a field; but he might well think it worth his while to express some religious idea by means of significant marks made upon its surface. For us, however, it is an impossible task to determine with any assurance the ideas associated with such figures. Nothing is more hopeless than to recover an oral tradition when its last recipient has passed

[1] Sir Bertram Windle, "A note on an early interment near Macroom," JRSAI xlii p. 169: reproduced IPCT p. 215.

into the world of shadows. We must be content with the husks; the bronze-age folk have carried the kernels with them to the grave.

The figures used in the Irish sculptures are rectilinear or curvilinear geometrical figures. The former are straight lines (single or in groups), zigzags, crosses, lozenges, triangles, and sometimes, though more rarely, squares or rectangles. The latter are circular, saucer-shaped hollows in the stone, or else circles, circular arcs, groups of concentric circles, ovals, or spirals The spirals may be single or multiple. More elaborate figures are sometimes used, for the greater part consisting of combinations of the simple elements which we have enumerated.

There are a few principles of distribution to be noticed which must have some meaning, although it is impossible for us to determine what that meaning may be. Groups of concentric circles, with or without a saucer-shaped mark at the centre, and crossed or not crossed by a radial groove, are found all over Ireland on rock-surfaces or on isolated stones; but all such groups, except the simplest kind (without central saucer or radial groove) seem to be avoided in the chambered tumuli.[1] This suggests that the symbolism involved (whatever it may have been) was not appropriate to burial places. Spiral figures are confined to the northern half of the island; but this is only one case of the seemingly capricious distribution of the spiral as a motive of ornament or symbolism throughout Europe. Certainly the absence of the spiral from the sculpture of bronze-age monuments of France, with the conspicuous exception of the great tumulus of Gavr' Inis, offers a very persuasive argument in favour of that monument being the work of a colony of the same people who in Ireland erected the similar monument of New Grange. On the other hand, it would be extremely rash to endeavour to explain the distribution of the spiral in Ireland with the help of the literary traditions which historians have transmitted to us about the Tuatha Dé Danann. These and similar traditions can explain nothing in Irish archæology; on the contrary, they require all the light that archæology can offer to explain themselves.

As a rule the sculptures have been made on the stone by the process of pocking. The design was probably first outlined on the surface to be decorated with chalk, mud, or some other

[1] On these see [Bishop] Graves, "On a previously undescribed class of monuments," TRIA xxiv p. 421: Rev. J. Graves, "On cup and circle sculptures as occurring in Ireland," JRHAAI xiv p. 283. See also G. H. Kinahan, "On an inscribed rock surface at Meragh, Rosguile, Co. Donegal," *Journal of the Anthropological Institute* xviii p. 170.

easily manipulated medium. A sharp-nosed hammer, presumably of stone, was used to break out grooves by crushing, along the lines of the design. In some cases the grooves, after being formed in this manner, were rubbed smooth, so as to eliminate the roughness produced by the pocking; an example of this will be seen in the kerb-stone under the entrance to New Grange. But in most cases the artist was content with leaving his work as it was, after the hammering process has been completed.

There is, however, another group in which the lines were cut with some kind of chisel: and contrary to what we should *a priori* have expected, this seems to be the older technique. Such a conclusion is indicated by a stone in the subsidiary chamber of Dowth. This stone has certainly formed part of an earlier monument, or has itself been an independent monument earlier than the tumulus of which it now forms a part. At that first stage in its history it was partly covered with simple geometrical patterns—squares with their diagonals, circles with radii, etc. These were *chisel-cut.* When the builders of the tumulus appropriated the stone, they first prepared its surface by pocking it smooth all over; this form of dressing was used in many of the stones here and in the neighbouring tumulus of New Grange. New devices were then *pocked* upon the pocked surface, of a character quite different from those in the chiselled technique, and apparently associated with a different order of ideas. But in preparing the surface of the stone, the builders carefully preserved the older devices. Doubtless there were associations with these which roused their superstitious fears; they avoided the parts of the stone which bear the chiselled characters, so that where they occur the original surface of the stone remains undisturbed.

In the tribal ceremonies of the aborigines of Australia, part of the ritual consists of making conventional figures on the ground—they cannot be called drawings, for they are not recognizable representations of anything—which are explained as delineations of certain traditional events celebrated in the proceedings. The old men explain to the youths the meaning of these symbolic devices, which bear a singular resemblance to some of the bronze-age sculptures at present under consideration.[1] The monotonous repetitions of cup-marks, groups of concentric circles, and other figures, which we find upon rock-surfaces in Europe may by analogy be the records of many

[1] See the illustrations in chapter vii of Spencer and Gillen's *The Northern Tribes of Central Australia* (London 1904).

repetitions of rites, rather than of a single consecration of a holy place. This would best explain their random distribution. It may also be that the symbols cut inside the chambers of tumuli were in some cases additions made by visitors or by devotees. On the other hand there are certain examples of sculpture in these monuments which must necessarily have been formed on the stone before it was placed in position, as it would have been impossible to carve it afterwards. There is at least one stone in such a monument (Carn T in the Lochcrew series) in which the sculpture—apparently a very elaborate and unusual device—cannot be properly seen. The spectator has to peep through a narrow fissure in the masonry for a mere tantalizing glimpse, which is all that can be obtained without demolishing the entire structure. In such a case we must assume, *either* that the ornamentation belongs to a previous appropriation of the stone, and that the carn-builders were indifferent to it; *or* that the ornamentation is not mere ornament, but had a magical purpose, which would work quite as well under concealment as exposed to view—if not better.

One example, and one only, of bronze-age ornament *in colour* remains in Ireland—probably the only surviving example in Northern Europe. It is a zigzag pattern, discovered by M. l'Abbé Breuil in the same carn.[1]

But of all the sculptured stones of Ireland, perhaps the most important (next to the stone of Clonfinloch) is the block discovered by Dr. G. H. Orpen at Hollywood (Wicklow), and first published by him.[2] It bears upon it the figure of a labyrinth, identical, and undoubtedly in some way radically connected with, the conventional representations of the labyrinth of Dædalus as depicted upon Cretan coins. The bronze-age date of the Hollywood stone, which was in dispute, was established by Dr. Bremer, who discovered a similar labyrinth, smaller and more rudely fashioned, among the undoubtedly

[1] For an elaborate study of Irish bronze-age ornament, see G. Coffey, "Origins of prehistoric art in Ireland," JRSAI, running serially through vols. xxiv-xxvii. The best collection of illustrations of sculptures will be found in the same writer's *New Grange (Brugh na Boinne) and other Incised Tumuli in Ireland* (Dublin 1912) —a revision and expansion of papers contributed to TRIA vols. xxx, xxxi. Descriptions of individual specimens are scattered through the proceedings of societies. See especially W. Frazer, "Notes on incised sculpturings on stones . . . near Loughcrew," *Proceedings Soc. Antiqu. Scot.* xxvii p. 294. The originals of the drawings there reproduced are at present in my possession, but will before long become the property of the Royal Irish Academy. See also Burkitt, *op. cit.:* Abbé H. Breuil, "A study of the chronology of bronze-age sculpture in Ireland," PRIA xxxvi p. 1: R. A. S. Macalister, "The goddess of death in the bronze-age art and the traditions of Ireland," *Jahrbuch für prähistorische und ethnographische Kunst* II p. 255.

[2] JRSAI xli p. 183. The illustration is reproduced in IPCT p. 233. See further, G. H. Orpen, "The Hollywood stone and the labyrinth of Knossos," JRSAI liii 177.

bronze-age sculpturings on a stone at Sess Kilgreen.[1] There is a mark resembling a cross on a stone in the neighbourhood, which has suggested a Christian date for the larger sculpture; but this cross also Dr. Bremer has shewn to be of the Bronze Age; it is not the Christian emblem, but is four cup-marks connected by grooves.

Other important collections of sculpturings, associated with burial monuments, are to be seen at Clover-Hill, near Sligo,[2] which is probably one of the latest of the series, as the designs approximate to La Tène types: Sess Kilgreen [3] and Knockmany [4] in Tyrone: Castle-Archdall Deerpark (Fermanach).[5]

It is not necessary to suppose that all markings upon stone have a similar purpose in all cases. This is especially true of cup-markings, some of which may have a utilitarian purpose, such as mortars, pits for watering cattle, etc. More particularly may we mention what are often called *bolláin* (" bullauns," bowls); namely, blocks of stone with a circular or oval vat-like hollow formed in them. These we may notice here, although undoubtedly many or most of the examples known are later than the Bronze Age. They certainly served different purposes: as basins, vats, tubs; as heel-stones for receiving the pivots of doors; as fonts or holy-water stoups. Some of them are still used for superstitious purposes which may be primary or secondary, *i.e.* may actually be their original use still surviving, or else a use that has come into being as a practical application of the principle *omne ignotum pro magnifico*. Water lying stagnant within them is used as an ointment for sore eyes or cutaneous maladies: in one case a string tied round a stone lying in such a hollow is borrowed that its virtue may serve to heal a strained limb.[6] [On the other hand, similar stones are used in a ritual of cursing on the Island of Inismurray.][7] A very large number of these " bullaun " stones have been described: we may here content ourselves with a few references, selected almost at random.[8]

[1] Figured in Coffey, *New Grange*, p. 106. The discovery of the labyrinth is reported in W. Bremer, " Note on the Holywood stone," JRSAI lvi p. 52. This discovery was Dr. Bremer's alone, though in the paper quoted he generously accords a share in it to myself.

[2] Wood-Martin, *Rude Stone Monuments* p. 92 ff.: Coffey, *New Grange* p. 109.

[3] G. Coffey in JRSAI xli p. 175: *New Grange* p. 106: M. Burkitt *op. cit.*, also *Prehistory* (Cambridge 1921) p. 288 and plate xl.

[4] W. F. Wakeman, " The megalithic sepulchral chamber at Knockmany, Co. Tyrone," JRHAAI xiv p. 95: Coffey *op. cit.* p. 98: Burkitt *op. cit.*

[5] W. F. Wakeman, JRHAAI xv 544 ff.

[6] H. S. Crawford, " Notes on stones used as a cure in Killerry, near Dromahair, and on certain bullauns," JRSAI xliii p. 267.

[7] W. F. Wakeman, *Inismurray* p. 59 ff.

[8] W. F. Wakeman, " On the bullan or rock-basin as found in Ireland," PRIA xvii p. 257: H. S. Crawford, in JRSAI xliii 170, xl 60, 171, xlii p. 340: G. C. Stackpoole, *ibid.* xxxiv 190: S. Howard, *ibid.* xxxvi 80: W. F. Falkiner, *ibid.* xxxvi 420.

At some places to the south of the city of Dublin—Dalkey, Rathmichael, Tully—there are certain *Christian* monuments which shew a singular recrudescence of the bronze-age cup-and-circle pattern. We may perhaps conjecture that a local sculptor chanced to see, and was moved to imitate, some bronze-age carving.[1]

Religion

The study of ancient religion, as revealed by documentary evidence, is of great importance and interest; but it has no place in a purely archæological history. Let it suffice to say here that there is reason to believe: That the Bronze Age people of Ireland had a religion, which consisted in the adoration of certain deities with sacrifices, human and animal—the evidence for human sacrifice cannot be evaded by any ingenious jugglery, and it is a false and superficial patriotism to endeavour to do so. Both Human Sacrifice and Cannibalism are extremely interesting anthropological phenomena, and if Ireland has any contribution to make to the solution of the problems which they involve, so much the better! That, further, certain animals were held sacred. That there were periodical assemblies at which rites were performed, expressly for the purpose of securing fertility in crops, cattle-stalls, and the human family. That at such rites, ritual dances and other ceremonies were performed, accompanied by that instrument of world-wide use, the bull-roarer. And that the dead, or some of them, were deified, as well as the reigning chief, by whatever name he might have been called.[2]

Here we are more especially concerned with the tangible monuments which may reasonably be connected with ancient religious rites. These are certain structures formed of great stones, which are especially common in Ireland.

Generally speaking, the Rude Stone Monuments of Ireland agree in type with those of the neighbouring countries of Europe. They may be considered under the following subdivisions:—

1. Single *Meini Hirion*, or Standing Stones.
2. *Meini Hirion*, grouped in circles or alignments.
3. Dolmens and related structures.

[1] See J. A. P. Colles, "Some incised stones at Dalkey and Tullagh, Co. Dublin," JRHAAI xi p. 208: T. Drew, "Concentrically incised stones found in the counties of Dublin and Wicklow," JRHAAI x p. 439: P. J. O'Reilly, "Christian Sepulchral *Leacs* and free-standing crosses of . . . Rathdown, Co. Dublin," JRSAI xxxi pp. 134, 246, 385.

[2] In IPCT, chapter ix, some details filling in the above short summary will be found. But the author is reserving the whole subject for fuller treatment in a later work. On Human Sacrifice see *Revue Celtique* ii p. 200; Ériu ii p. 86.

We shall consider the first two of these in the present section, reserving the third for the following section, on the disposal of the dead.

Single standing stones are extremely common throughout the country, and are often of considerable size. Stones of from 4 to 6 feet in height are, on the whole, the most numerous, but, although there is nothing that can compare with the gigantic *Men er Groah* at Locmariaquer in Brittany, stones of as much as 16 to 20 feet in height are by no means infrequent.

It is not possible to assign a specific date to monuments of this nature. The setting-up of a rude pillar-stone as a monument is a practice which was not confined to any one era. At Furness (Kildare) a bronze-age interment was found beneath one such stone, thus indicating the date to which its erection is to be assigned ; but elsewhere there are similar stones with Ogham inscriptions, and even with crosses, cut upon them, which would seem to date them to a time within the period of iron-age literary culture, or even of Christianity. We say *would seem to date them*, for it must be carefully noted that this evidence is not absolutely conclusive. We cannot, of necessity, assume that the inscriptions or crosses are in such cases contemporary with the first setting-up of the monument ; they may have been much later additions, belonging to a secondary use of the stone long subsequent to its first erection. Nothing will settle the question of the date of a rude stone monument but excavation, and the discovery of datable objects in *essential* association with it. We emphasize " essential " ; for it is possible for such an association to be entirely non-essential and accidental. The Furness excavation just mentioned presented examples of both cases. A cist was found at the foot of the standing stone, in such a position that the stone formed part of the cist. Thus the cist and its contents were clearly in close and essential association. But in the soil surrounding the foot of the stone was found a halfpenny of George III, which was as obviously an extreme case of accidental association.[1]

Just as no specific date can be assigned to standing stones, so we can assign no specific purpose to them. They served a variety of purposes.

Many, possibly the majority, were grave-marks. Others were land-marks. Others were figures of deities, or did duty as such, taking the place which statues would have taken, had the preparation of such been possible in the state of art at the

[1] On this excavation see R. A S. Macalister, E. C. R. Armstrong, and R. Ll. Praeger, " A bronze-age interment with associated standing-stone and earthen ring, near Naas, Co. Kildare," PRIA xxx p. 351.

time, or had been permitted by the religious authorities.[1] The last two uses for standing stones may be deduced from passages in the Irish Law tracts. In the glosses to the tract called *Bretha Comaithchesa* ("Judgements of Joint Tenancy") there is a list of the different kinds of land-marks; and among these there is a reference to "land which a 'Stone of Adoration' marks out". The same expression, "Stone of Adoration," is used in another tract called *Fastad Cirt ocus Dligid* ("Confirmation of Right and Law"), where particulars are given about ancient practices of ordeal.[2]

But though outwardly diverse, these three uses of standing stones are essentially the same. They have this in common, that they are all religious in their purpose. In ancient times, a stone set over a grave was much more than the mere memorial of a dead man. The welfare of the dead was a continued care of the living, from motives of policy as well as of affection. The dead man, on the whole, cherished feelings of malignant jealousy toward those who still enjoyed the blessing of the light of day from which he had been cut off. Therefore he had to be propitiated with offerings of one kind or another. This being so, some medium had to be provided, so that the Material and Tangible might communicate with the Immaterial and Intangible. Best of all for this purpose was a tree growing over the grave. It was animated by a mysterious life which might well be derived from the life of the man buried beneath it. Such an idea is one of the commonest elements in folk-tales. But if there is no convenient tree, a stone will serve; and a stone has certain advantages. It can be set up at once; a tree will require time to grow, and meanwhile the hungry dead is impatient for his offerings. A stone will endure indefinitely, whereas a tree must, in time, decay and fall. A stone set up over a grave is thus in a very real sense the dead man himself, or, rather, the receptacle in which his personality is clothed, so that he may receive the homage of the living survivors.

Of the worship of stones as the representatives of deities, we have evidence down to a very late date. The Church Councils of Gaul were compelled to fulminate against the perpetuation of such heathen rites century after century; [3] but the rites are, even yet, not extinct, as the facts gathered by Sébillot, Le Rouzic, and others clearly show.[4] The lives of

[1] On the possibility of the *prohibition* of statues of the gods, see S. Reinach, "L'art plastique en Gaule et le druidisme," *Cultes, Mythes et Religions* i 146.

[2] *Ancient Laws of Ireland* (Rolls Series) iv 142, v 472.

[3] See Bertrand, *La religion des Gaulois* p. 400 ff., for full particulars of the decrees of these councils.

[4] See Sébillot's *Le folk-lore de France* (Paris 1904-07), and his smaller volume, *Le Paganisme contemporain chez les peuples celto-latins* (Paris 1908). See also Z. le Rouzic, *Carnac* (Vannes 1924).

St Samson in Brittany and of St Patrick in Ireland shew us those missionaries unable to eradicate these ancient practices, and finding themselves constrained to adopt the compromise of taking them into the Christian system. By cutting crosses upon the stones which were the objects of worship, they exorcized the paganism from them, and turned them into objects of Christian cult. This is the most probable explanation of the large number of rude pillar-stones in Ireland which bear crosses cut upon them. It is to be noted that the cross is often cut, *not* at the head of the stone, where we should have expected to find it if the monument had from the first been intended to bear the emblem ; it is frequently at a height of about 5 feet from the ground, the most convenient position for carving it subsequent to the erection of the stone.

Even when the stone was, as we might express it, a mere landmark, it was necessarily a sacred stone. *Terminus* was a most ancient and worshipful deity of Italy. The ancient Babylonians engraved their *kudurru* or landmarks with symbols of the zodiacal signs, so that the deities which presided over those sacred houses should protect the stone from the accursed one who should remove his neighbour's landmark. The "Stone of Adoration" set up to mark the boundary of a property was likewise watchful over the interests of the owner of a property. Thus, whatever the specific purpose for which any individual stone may have been set up, it was in *all* cases a sacred stone, and it is for us a memorial of the religion of the people of the Stone, Bronze, or Iron Age as the case may be.

That standing stones are recognized as resembling human figures is expressed in the name *Fear Breagach*, "false man," sometimes given to them, both in Ireland and in the Scottish Highlands. There is nothing in Ireland quite analogous to the statues-menhirs of the South of France : but there is a stone at Fanahy (Cork) which certainly seems to have been intentionally shaped to resemble a human figure.[1]

Besides the single stones, standing stones are often found in groups. The simplest of such groups is a pair of stones side by side, resembling the posts of a gate. Quite possibly this is what they actually are, in some cases : the jambs of an entrance, either to a land-owner's property, or else to a sacred enclosure. It may be that the new instrument of archæological research which aerial photography has put into our hands will reveal traces of enclosures connected with such pairs of stones. But they may serve other purposes as well ; for example, they may be the head- and foot-stones of graves. Or they may

[1] It is illustrated in JRSAI xxxviii p. 9.

represent pairs of deities, such as the Gaulish Grannos and Sirona, or Sucellos and Nantosvelta.

Alignments, as the name implies, are rows of stones set in straight lines. This form of monument is not very common in Ireland, and there is nothing in the country at all comparable with the wonderful structures of the kind in Brittany. Lines of three, four, or five stones are found. We may mention, as a single example, a series of three called " The Three Friars " in the neighbourhood of Mullinavat (Kilkenny), about three miles to the west of which there is a single stone, 12 feet in height, near which human bones and urns have been found.[1] It is rare to find any greater number than five ; but there is a number of alignments of numerous *small* stones at Cavancarragh, Fermanach.[2] A very unusual form of alignment, in which the line is returned at right angles with additional stones at each end, stands close to the oratory of Gallarus (Kerry).[3]

Stone circles are much more common. In studying these, we must learn, in the first instance, to distinguish between stone circles proper, and what we may call fencing-circles. The latter are rings of standing stones, or more commonly of boulders laid upon the surface of the ground, enclosing dolmens or tumuli. These no doubt mark out the sacred area surrounding the grave-sanctuary, and have no other purpose. They never have additional stones outside the circumference, as we shall see to be the case in stone circles proper. Sometimes their place is taken by walls of stone or of earth. At Clochmanty Hill (Kilkenny) there was a circular heap of stones 87 paces in circumference, surrounded with a circular fence of stones enclosing 2 or 3 acres,[4] and 95 feet distant from the carn at its nearest point. The surrounding wall was made of large stones set on edge, of a maximum height of 3 feet. The carn was trenched through, and a burial chamber was found in the middle, formed of " immense stones " piled upon one another. There were two adult skeletons, but no other deposits.[5] A notable example of an earthen mound surrounding a burial monument is the vallum, some 15 feet high and enclosing a circular space of 10 acres, now called " The Giant's Ring," at Drumbo (Down).[6] That this was the grave-sanctuary of some

[1] JKAS i p. 26. An alignment of five large stones at Barachauran (Cork) is figured in IPCT p. 303.

[2] Described by Wakeman, JRHAAI xiv p. 499.

[3] Described by Sir Bertram Windle, with a sketch-plan, in " A note on two megalithic structures near Gallarus," *Kerry Archæological Magazine* i p. 339.

[4] A protest should be made against this vague way of stating dimensions. A " pace " may be anything from 2 to 3 feet long, according to the pacer ; and in 87 paces there is thus the possibility of an error of 87 feet.

[5] This description is from JKAS i 289.

[6] See JRSAI xxix p. 353 : xxxv p. 286 : Borlase, *Dolmens* i p. 275 : H. C. Lawlor, " The Giant's Ring," BNHPS 1917-18 p. 13.

personage of importance is indicated by the fact that it attracted to itself a large cemetery—including at least one underground chamber of great interest [1]—as a Christian graveyard surrounds its church.[2]

Stone circles proper are formed of standing pillar-stones set in a circular ring. Sometimes they stand on the ground; sometimes they are set in an earthen ring-wall.[3] In most cases the circle has been carefully set out, probably by using as a sweeping radius a cord attached to a peg at the centre. There is no rule as to the number of stones in a circle; some are found with only five stones—a circle could hardly be defined by less—while others are found with as many as twenty. Though this latter number is surpassed in other countries, circles with a greater number of stones are not common in Ireland.

Sometimes groups of stone circles are found together in one place. By far the most remarkable series of the kind is that surrounding the small lake called Loch Gur (Limerick), which was probably an especially sacred lake.[4] It is famous for the number of stone and bronze implements that have been found around and in its waters.

When a stone circle is complete there is almost always an extra stone standing outside the circle (rarely inside). This is an essential part of the structure, and it must be accorded a special importance when we endeavour to determine its purpose.[5] Stone circles of the kind described do not contain any structure above ground within the area.

The Irish circles are usually single; but there is a fine double circle at Ballynoe (Down). The inner ring is (exceptionally) not a true circle, but an oval, 60 feet by 42 feet, within a circle of 100 feet diameter. Tradition says that there were at least two other rings, now destroyed, outside the present outer ring.[6]

There is an admirable stone circle near Glandore (Cork)

[1] Described with its contents in an anonymous article in UJA I iii p. 358: illustration reproduced IPCT p. 352.

[2] See a note by W. Gray in JRSAI xxi p. 164.

[3] An example of this is to be seen in the grounds of Masonbrook House, near Lochrea (Galway); figured PRIA xxxiii plate xliii.

[4] (Sir) Bertram C. A. Windle, "On certain megalithic remains immediately surrounding Lough Gur, Co. Limerick," PRIA xxx p. 283. An early paper by T. Crofton Croker in the *Gentleman's Magazine* 1833 part i p. 165 (reprinted in the "Gentleman's Magazine Library," *Archæology* part ii p. 17) is also worth referring to. See also A. L. Lewis, "Some stone circles in Ireland," *Journal Anthropological Institute* xxxix p. 517.

[5] There is a pair of stones outside the circle of Lissyvigeen, near Killarney: see JRHAAI xvi p. 306, JRSAI xxxvi p. 345. A good typical example of the normal form is described and illustrated by Sir Bertram Windle in JRSAI xlv p. 316: see also IPCT p. 294.

[6] JRSAI xxxv p. 301.

with a number of smaller rings in the immediate neighbourhood. It is remarkable as having a "recumbent stone" in its periphery, a characteristic otherwise peculiar to the stone circles of Aberdeenshire. The monument has been described with good plans and photographs by Captain Boyle Somerville,[1] though I cannot subscribe to the astronomical theories which he expresses.

The determination of the purpose of these rings is simplified for us by the well-known legend of St Patrick and Cenn Cruaich, or Crom Cruaich, which is related in the *Lives* of the saint.[2] Patrick, in his peregrinations, came to Magh Slecht, where was the chief idol of Ireland, surrounded by twelve other (subordinate) idols. Some versions tell us that Cenn Cruaich was of gold, and the others of stone; the version quoted in the footnote gives the more moderate and more probable information that the chief god was covered with gold and silver, and the other gods with brass (bronze). We need not here enquire into the topography of the story,[3] or pursue further the narrative of how the saint destroyed the idols. But we may claim that it is quite legitimate to utilize this legend as a guide to the interpretation of this class of monument. Whatever its historicity may be, it obviously describes a stone circle of the less usual kind, in which the extra stone is *inside* the ring. It comes down to us in a literary form, from a time when such traditions were a living force beyond what we in our prosaic days can imagine. It explains the circle, and it explains the single separate stone, reasonably and satisfactorily. It not only explains the extra stone, but it also makes us understand why it is so often much larger than the stones of the ring, or, as in the famous circle called "Long Meg and her Daughters," near Penrith, why it is sometimes covered with sculptured ornament. For it tells us of a pantheon with a chief god—we need not take too seriously the alleged name, Crom or Cenn Cruaich, which may just as well be a nickname used by Christian writers in order to avoid the sin of mentioning the name of a heathen deity—and of a number of other gods in subjection to him. There is no reason to question the statement that the stones of the circle were adorned with metal casing or overlaying; so soon as they lost their sanctity with a change of religion, such valuable adornments would very quickly disappear. In all cases, when we examine a rude stone monu-

[1] "Notes on a stone circle in Co. Cork," JCHAS II xv p. 105. Another photograph of the same monument, *ibid*. II ix p. 24, shews the recumbent stone well.

[2] See, for example, *The Tripartite Life of St Patrick* (Rolls Series) vol. i p. 90.

[3] Which has been investigated with admirable acumen by (Rev.) J. P. Dalton, "Cromm Cruaich of Magh Sleacht," PRIA xxxvi p. 23.

ment of any kind, we must bear in mind that Time has left us nothing but the skeleton. All the decorations in paint, in metal, in embroidery, all adjuncts in wood or in other perishable materials, have totally disappeared.

Burials have sometimes been found inside stone circles, on which account they have been supposed to be merely grave-sanctuaries. But this is not a legitimate inference. There are legends of dark doings at the idol called Crom Cruaich : of human sacrifices, in which many victims perished. The bodies of such victims must have been disposed of in some manner, and what more appropriate place of sepulture could be found than the sacred area around which the gods moved in a ceaseless circling procession ?

I may as well say here quite plainly that I have no faith whatsoever in correlations between the orientation of Rude Stone Monuments of any kind and astronomical phenomena, and in deductions drawn therefrom ; or in explanations of groups of cup-markings as attempts at star-maps.[1]

Holed Stones.—Certain standing stones have holes perforated through them, to serve some unknown purpose. But here again, as in the case of the basin-stones, we must make a discrimination, for probably there was not one purpose contemplated, but many. Even Christian monuments are found to be "holed," it may be merely for ornament, or to receive a gnomon that would turn the stone into a sundial, or for some other purpose. Door-sockets and door-hangings may also account for the perforations in some stones. All such possibilities should be exhausted, in endeavouring to explain a "holed stone," before we have recourse to any picturesque esotericisms.[2]

The Disposal of the Dead.

The disposal of the dead in Ireland, during the Stone and the Bronze Ages, is a complicated subject of study. This is due, first, to the variety of the processes adopted, and secondly to the very unsatisfactory nature of the material at the disposal of the student. Considering the number of ancient burials

[1] Such as will be found in PRIA xvi 20 : JRSAI xxxix 192 and subsequent numbers. See also *Archæologia* lxxiii p. 193, where the orientation of certain Irish rude stone monuments is *inter alia* discussed. On the opposite side see Dr. Mortimer Wheeler's wise and moderately-expressed remarks, *Prehistoric and Roman Wales* (Oxford 1925) p. 106.

[2] W. Frazer, "On 'holed' and perforated stones in Ireland," JRSAI xxvi p. 158, gives a list of Irish examples, but without any attempt at classification of monuments which have nothing in common but the mere fact of perforation. He has missed some references, as for instance a good illustration in the same journal, xxv p. 286.

that have been found, the information on record about them is shamefully scanty. The pestilent popular tradition about buried treasure is responsible for endless damage. It is too often recorded that a labourer in ploughing a field has exposed an urn: has eagerly seized it, thinking that he has at last lighted on the "crock of gold" of his dreams; and in disappointment at finding in it nothing but ashes, has utterly destroyed the whole deposit, in a fit of childish spite. Yet more reprehensible is the collector who opens a tumulus in order to add its contents to his private cabinet, and takes no steps to put his discoveries on record. And even when descriptions of the finds have found their way into print, the writers are too often destitute of the slightest idea of how to record them: the most verbose descriptions often display an almost uncanny genius for withholding information on points of the first importance.

We may classify the recorded bronze-age interments of Ireland under the following heads:—

1. Earth burials without cists.
2. Earth burials with cists.
3. Dolmen burials.
4. Cist burials in tumuli of earth (barrows) or of stone (carns).
5. Cave burials.
6. Burials in chambered tumuli.
7. Jar burials,

and, as in all five groups the interments may be by inhumation or by cremation, we have a total of ten possible varieties.[1]

1. Earth burials were probably the commonest of all, and most likely the bodies of the humbler members of society were disposed of in this manner. In the damp climate and soil of Ireland the preservation of buried bodies cannot be counted upon; even the skeleton may decay away so that nothing remains but a few insignificant and rotten fragments that may escape notice altogether. Occasionally small beads or other grave-goods may be deposited with the dead; such relics, when found in the earth, may be the last trace of an interment of which the body has decayed away to nothing, or, at least, has been overlooked by the finder. When the body has been burned and the ashes placed in an urn, the urn will survive; and if it has the good fortune to escape destruction in the manner above referred to, it may succeed in transmitting to us the message which the bronze-age folk committed to its keeping. In the majority of cases the urn was inverted over

[1] A number of examples of all kinds, other than those recorded here, will be found in IPCT chapter x.

the ashes; probably a cloth was tied over the mouth of the vessel—like the parchment cover tied over a jam-pot—and the urn was then placed mouth downward in the grave. Sometimes the mouth rests on a flat stone; more rarely a similar stone is placed on the upturned bottom of the vessel. At Dunachy (Antrim) an urn was found inverted over some bones which (as is usual in the writings of amateurs) are described as being "of great size".[1] This indiscretion encourages us to disregard the further statements that the urn was made on the wheel, and that it had been glazed! On the other hand, the description contains one interesting and probably authentic fact, that the urn had been deposited without a bottom, a flat stone having been thrust into the fractured base to close it. (We may perhaps compare the curious discovery of a pottery *tube* or *cylinder*, without a bottom, found near Thomastown (Kilkenny): but this excavation was unfortunately bungled, and the observation may be incorrect. The "tube" stood upright, and was full of partly calcined bones.)[2] It is unusual to find any other grave-goods deposited with a simple interment such as this. But it not infrequently happens that there is a small pot—the so-called "incense-cup"—with the ashes inside the urn. This we may suppose to have had some ritual purpose, which in our ignorance of the ancient ceremonial we can no longer recover. A cemetery of urn burials, apparently without cists, was found at Gortnacor (Antrim), but very insufficiently reported upon.[3]

In the probably not infrequent case of a cremated body being deposited in the earth without an urn, the chance of its discovery is very small indeed.

2. More conspicuous, and therefore less likely to be missed, are cist-burials. In these a small chamber is made in the earth, by means of flat flag-stones—one (not always present) forming the floor of the cist, at least four forming the sides, and one or more forming the roof. Inside the cist is placed the body, unburnt or cremated; in the latter case with or without an enclosing urn. Other deposits may or may not be placed in the cist or in the urn.

Cists are found singly or in groups, the latter forming cemeteries. Such a cist-cemetery was found at Drumnakilly (Tyrone), and has been described by Wakeman,[4] who, however,

[1] Report by E. Benn in JKAS vi p. 216. [2] JKAS viii p. 328.

[3] S. F. Milligan, "On an urn cemetery in the townland of Gortnacor near Broomhedge, Co. Antrim," JRSAI xxxvi p. 42. The author of this paper appears to envisage the possibility of this bronze-age cemetery being connected with the battle of Magh Raith, which was fought in 637 A.D.!

[4] "On a pagan cemetery at Drumnakilly, near Omagh, County of Tyrone," JRHAAI xii p. 499.

was only just in time to rescue the last relics; the cemetery had been uncovered piecemeal during many years by agricultural operations, and the finds dispersed. Some parts of Mr. Wakeman's description are very obscure: thus, he speaks of the urns as being laid "in two tiers, one urn exactly, or very nearly exactly, over another, the vertical space between them being about two feet and a half. . . . The urns were in rows extending from east to west and crossed at right angles by other rows." A diagram would have helped us to understand what this means; it seems to imply that the urns had been deposited in shaft-like graves, at a depth (specified by Wakeman) of 8 feet below the present surface; that the graves had then been partly filled in, and a second urn deposited above each of the first series. This suggests that every pair of urns belonged to one deposit, and at once makes us think of the practice of *sati*. Some of the urns, but apparently not all of them, were contained in small stone cists; certain of the stones had cup-markings upon them. In two of the cases which came under Mr. Wakeman's observation there were "incense-cups" inside the cinerary urn, but there were no other deposits, nor were any of the calcined bones that were examined other than human. The urns themselves were exceptionally fine: they were adorned with basket-work and herring-bone patterns; one very remarkable specimen had a fretwork of diagonal bands in relief over the lower part, made of a clay different from that in the body of the urn. Some of them had mouldings recalling the iron-age pottery from Aylesford in Kent;[1] we must regard the cemetery as being from a date very late in the Bronze Age if, indeed, it is to be assigned to that period at all.

Another important urn-cemetery, in which the urns were deposited in cists, was found at Ballon Hill, Carlow, which yielded many fine examples of pottery. One remarkable deposit in the series consisted of a great block of granite, supported on others; beneath this were three unburied skeletons; underneath these some blocks of granite, which, when raised, were found to cover a bed of ashes with pottery fragments contained in it.[2]

The above is an example of cremation in connexion with cist-burial. Inhumation is illustrated by a discovery made at Lugacurren (Leix). Here there were found two cists side by side, one of them subdivided into two unequal parts by a cross-slab. They lay parallel, east to west, and 9 feet apart; the

[1] See A. J. Evans, "On a late-celtic urn-field at Aylesford, Kent," *Archæologia* lii part ii p. 315.

[2] Rev. J. Graves, "The pagan cemetery at Ballon Hill, County of Carlow," JKAS ii p. 295, and further notes in the same journal, iii p. 374, ix p. 209.

cover-stones of the cists were 7 inches below the surface. A creditable account of the discovery is on record, the work of a local school-master, Mr. David Collins.[1] From this we learn that there was an urn—presumably a food-vessel—in the south-east corner of the undivided cist, and in the larger compartment of the other; some beads of a blue stone—shape and material not specified, unfortunately; it *might* have been the mysterious callaïs, for aught we know!—and a bronze bracelet with overlapping ends, were also found. Mr. Collins notes that some of the bones, especially the vertebræ, were missing from the skeletons. This suggests that we have here a case of reburial after the decay of the flesh. The largest of the cists was only 3 feet 6 inches long by 1 foot 7 inches high; it would have required very tight binding in the contracted position to have placed a body, still clothed with flesh, in a receptacle so small.

A variety of the cist receptacle was found at a place near Ballyragget (Kilkenny).[2] Here there was an urn containing ashes, inverted over a flat stone and placed in a *circular* chamber shaped like a well-shaft, built round with dry stones and covered with an unhewn block of limestone.

If we may believe a description in JKAS v. 2 pp. 105-6, a parallel to the superposition of urns at Drumnakilly, already commented upon, was found at Timóg (Leix). Here, it is alleged, a cist was found with another cist underneath it. But it must be remarked that the nature of the article in which this find is described is such as to breed a complete scepticism.

An enigmatical grave at Rylane (Clare), described by Mr. Westropp from a communication made to him by Mr. A. Gethin Creagh,[3] does not appear to conform to any of the bronze-age types. It may be of the Iron Age, but its chronology is extremely doubtful. It was a trench dug down to the rock (depth not indicated). The length was 10 feet, the breadth 2 feet 6 inches; it was lined neatly with stone slabs wherever the sides did not consist of rock. The axis lay N.N.W. to S.S.E.; the N.W. end was rounded, and was formed of earth and small stones: the S.E. end was open. Marks on the stones shewed that there had been a fierce fire kindled at this end of the grave before the body was deposited. The skull lay in the rounded part of the grave. There were no deposits with the body—we do not learn whether the body was

[1] JRHAAI xv p. 446. It is possible to draw a diagram of the deposit from Mr. Collins's description—a good test, by no means always successful.

[2] Described in a letter from Rev. P. Neary, JRHAAI xii p. 115.

[3] "Primitive burial at Rylane, Co. Clare," JRSAI xxvii p. 178.

outstretched or crouched; but a part of a horse's skull lay on the slabs with which the grave was covered over.

A curious slab grave, also of uncertain date, on Church Island (Kerry), is described by Mr. P. J. Lynch.[1] It lies east and west, and is lined with slate slabs, one at the west end, two in the north side, one in the south side; the east end is left open. The cist is divided into two compartments by a cross slab. There are two cylindrical corner-pieces of stone, with a sector cut longitudinally out of each. It seems as though they had at first been intended to receive and support the ends of the slabs, but that the intention was abandoned, for they stand inside, not outside, the corners of the cist in which they had been placed. Some error must have been made in the construction which was not corrected.

3. Ireland is pre-eminently a land of dolmens. In the late W. Copeland Borlase's laborious but perverse work on the subject [2] he enumerates 780 dolmens as remaining in the country, not to mention 50 chambered tumuli and 68 megalithic monuments of uncertain character.[3] These numbers are certainly wrong, for in the absence of a formal archæological survey of the country there are, as yet, no means of obtaining exact statistics. But let us, for argument's sake, adopt them as an approximation to the truth. France has an area of six or seven times the size of Ireland. In the same proportion, France should contain between 4680 and 5460 dolmens. The actual number is given at 4458.[4]

The name "dolmen," though not wholly satisfactory—for it assumes a "Celtic" origin for the monuments designated, which is quite unjustifiable—is preferable to the other name, "cromlech" which is used in some English works on Archæology. The latter name does not accurately describe the character of the monument; it is, moreover, ambiguous, for the term is used in France to denote what we call a stone circle. However we may name it, a dolmen consists essentially of a large, more or less flat, stone, supported in an approximately horizontal position by upright stones, as the legs of a table support its board. This analogy is implied in the name dolmen, which in the Brythonic languages signifies "stone table". It is perhaps an unfortunate analogy, as it is responsible for the incalculable amount of nonsense—to which we need not again

[1] P. J. Lynch, "Church Island, Valencia Harbour, Co. Kerry," JRSAI xxx p. 155.

[2] W. Copeland Borlase, *The Dolmens of Ireland*, three vols., London 1898. A painstaking and well-illustrated work, but vitiated by much uncritical theorizing.

[3] *Op. cit.* vol. ii p. 418 (the pagination runs continuously through the three volumes).

[4] Déchelette, *Manuel d'archéologie* i 386.

allude—that has been spoken and written about "druids' altars".

The normal dolmen consists of one cover-stone supported by three uprights; examples of this type are to be found in most, if not all, of the Irish counties. There is, however, a considerable number of varieties, most of which may be classed under the following heads:—

(*a*) *Trilithons.*—Here the number of supporting stones is reduced to two. This form is very rare, although trilithons may form part of larger monuments (as Stonehenge in England, and the Irish structure called *Leac Chon mhic Ruis*, described below). I know of but one trilithon existing in Ireland as an independent monument—at Lochmoney (Antrim).[1] Another, on the slope of Mount Callan (Clare) has been reduced to the trilithon form in modern times, by the removal of the remainder of its stones, and so cannot be counted to this group. Clearly such a structure would be very unstable unless the stones were selected with care, so that it is not difficult to understand why this type of dolmen is so unusual.

(*b*) *Half-dolmens*, or as they are sometimes called, "Earth-fast" or "Demi-dolmens". In this type the cover-stone is only partly raised above the ground; it is supported in an oblique position by upright stones on one side only.[2] This is a common form; but in some cases the dolmen may have assumed its character after its erection by the collapse of the supporting stones at one side. A good example of this is the gigantic monument at Mount Browne (Carlow), which has a cover-slab weighing 100 tons—the largest in Europe outside Spain.[3] This huge stone was supported on very slender uprights, two of which have collapsed and let it down on one side.

(*c*) *Dolmens with Subordinated Cover-slabs.*—In this type there is a small subsidiary dolmen forming one of the supports of the main cover-slab; the latter is otherwise supported in the ordinary way by upright stones. This type, again, is very unusual. One of the finest megalithic monuments in the country is to be reckoned under this head—the structure called *Leac an Scáil* at Mullinavat (Kilkenny). There is an analogous monument at Dangan (Kilkenny) in a district rich in pre-historic remains. Here a cover-slab 12 feet square rests, not on monolithic supports, but on columns of two or three stones each.[4]

Again similar, though not quite identical, is the interpolation of a small flat slab between the cover-slab and one of the

[1] See Borlase (under name in index); also JRHAAI xvi plate facing p. 364.

[2] A number of these is illustrated in a paper by G. V. duNoyer, "Remarks on a class of cromlechs for which the name 'primary' or 'earth-fast' is proposed," JKAS ix p. 40.

[3] For an illustration see IPCT p. 328.

[4] JKAS i p. 26.

supporting stones, in cases where the latter proved too short for its intended purpose; an example is at Ballingeeragh (Waterford).[1]

(*d*) *Dolmens with more than three Supporting Stones underneath one Cover-stone.*—Although three is the normal number, it is by no means a necessary limitation. Four is quite common, and even more, especially if the cover-stone is of unusual size. The maximum number actually found in Ireland seems to be eleven; dolmens with eleven supports are to be seen at Kilternan and at Howth, both in Dublin. The cover-slabs of these two monuments are said to weigh 43 and 70 tons respectively.[2] For an unusual example see Plate I Fig. 2.

(*e*) *Dolmens with more than one Cover-stone.*—The addition of a second cover to a dolmen of normal form is not very uncommon; but more frequently the multiplication of cover-stones produces a monument of different type, usually called by the French name, *allée couverte*. Here there is a series of cover-slabs, supported on two parallel rows of uprights. As a rule the stones used in structures of this kind are of a smaller average size than those in the normal dolmens: the cover-slabs are seldom, if ever (at least in Ireland), raised to a sufficient height for even a short man to stand underneath them without stooping. There is a subordinate variety of *allée couverte* found in Ireland, especially in the south and west, in which the two rows of supporting stones are not parallel, but stand in diverging lines, so that the monument is wider at one end than at the other. The narrow end is usually closed with a slab. Monuments of this class are called " wedge-shaped dolmens ".

Allées couvertes of considerable size have sometimes been found sunk wholly or partly below ground. One such existed on the lands of Brownstown (Kilkenny), and is described as having been a trench about 12 feet long and 4 feet 6 inches wide, lined with stones. No trace remained of any covering. Another on the townland of Licketstown (Kilkenny), is described as having been about 25 feet long and 10 feet to 12 feet wide—which latter is improbable, owing to the difficulty of roofing a space so wide—and having stones 16 feet high at each end. This great monument was looted at the end of the eighteenth century; it is alleged that the spoilers found therein a gigantic skeleton and a huge sword, much rust-eaten, and

[1] Illustrated by G. V. du Noyer, " On cromlechs near Tramore in the county of Waterford, with remarks on the classification of ancient Irish earthen and megalithic structures," JKAS viii p. 474—a paper with some good illustrations, but mostly occupied with obsolete controversial matter.

[2] Borlase, *op. cit.* p. 433. Good drawings of these and other dolmens in the same county will be found in H. O'Neill, " The rude monuments of the county of Dublin," JKAS ii p. 40.

afterwards converted into knives—therefore, necessarily, of iron. A helmet "of most uncommon size" is also reported. This, if the facts were as alleged, is worthy of special note: but it would be rash to attach too much importance to this tradition, which was put down on paper sixty years after the discoveries; these objects may have belonged to a late secondary interment.

The reported gigantic size of the skeleton, in this case and in many similar, is an exaggeration of a subjective impression produced on the spectators by the great size of the monument, and by the name "giant's grave" often popularly given to these megalithic monuments.[1] This name is, of course, suggested by the imposing size of some of the monuments; but it is no modern tradition. It appears inferentially in an ancient life of St Patrick, who, having with his followers come across a grave 30 feet long, recalled to life its gigantic tenant in order to confute the scepticism of his companions as to the possibility of a man of such monstrous dimensions having existed. Incidentally, this was to the advantage of the giant, who was thereby rescued from the pains of Hell, and, submitting to baptism, was made a partaker in the joys of Heaven.[2]

A fine *allée couverte*, with a chamber at the end of the passage near Mallusk (Antrim), called *Carn Gréine*, "Stone-heap of the Sun," was excavated by Mr. Lawlor.[3] It is remarkable that nothing of interest was found in the chamber, although the passage contained many traces of cremated interments, one, near the entrance, being enclosed in an exceptionally large and fine urn.

A few dolmens have scribings on the stones. Of these the most remarkable is at Castlederg (Tyrone), one stone of which bears combinations of lines, to us meaningless, but interesting from the fact that they were not exposed to view in modern times until the capstone had been shifted from its place by some vandal. They must therefore have been formed on the stone at the time of, or previously to, the construction of the monument.[4]

Other dolmens bearing markings upon the stones are to be seen at Scrahanard (Cork), Lennon (Monachan), and we may perhaps add a structure, much injured by injudicious restora-

[1] This is probably the true popular traditional name; the other name frequently current among the peasantry, "druids' altars," is probably of recent introduction, derived from sciolists airing their accomplishments.

[2] Colgan, *Trias Thaumaturga;* Sexta Vita Patricii.

[3] H. C. Lawlor, "Investigation of the Cairne Grannia cromlech near Mallusk, Co Antrim," PRIA xxxii p. 239.

[4] See a note by T. O'Gorman in JKAS viii p. 184: also (Sir) S. Ferguson, "Inscribed cromlechs in Ireland," JRHAAI xii p. 523, and a letter by R. R. Brash, *ibid.* xiii p. 101.

tion, called *An Caiseal* in Glencolumkill (Donegal).[1] The first of these bears on the inner surface of one of its stones a number of random scratched marks, most likely indications of visits paid to a traditional sanctuary by devotees; the second has a row of unintelligible alphabetiform signs; the third bears ornamentation which must resemble the engravings in the late bronze-age chambered tumulus of Clover-hill (Sligo), if we may judge from the not very satisfactory sketch given by Borlase.

The use of dolmens began doubtless in the Stone Age; but the practice of constructing them certainly lasted in Ireland into the Bronze Age, and they cannot be considered apart from the great chambered tumuli which are the most conspicuous of the Irish bronze-age monuments. That they were places of sepulture is now a commonplace of knowledge. Discussion of their original form, of the history of the practice of erecting these great monuments, and of the process by which the engineering feat of erecting them was accomplished, belongs to a general treatise on Archæology, or to a special monograph on the subject, but not to a study of the antiquities of one particular region. Here, therefore, we pass these questions by: though we may record the probability that the covering stone was raised to the level of the tops of the supporting stones by being drawn up a sloping bank of earth with the aid of rollers: see Fig. 7, which represents the successive stages in the process of erection. The bare stones may have been supplemented to any extent with timber, or they may have been decorated with paint, coloured hangings, or other adornments. They may or may not have been covered with a mound of earth. The great majority of those now existing in the country are quite bare of covering. Some shew no indication that they ever were otherwise; others, of which the Scrahanard dolmen, mentioned above, is an example, are clearly surrounded by relics of a former earth-mound, presumably dug away by treasure-seekers. When there was no earth covering—and it is by no means to be assumed that all the fine dolmens that we see, erected of massive and imposing stones, were intended to be hidden away in earthen mounds—the dolmen was of the nature of a house for the soul of the dead man: a building which, by the action of sympathetic magic, would secure for him a habitation in the world of spirits; a receptacle in which offerings for the dead could be deposited. When there was an earthen mound, the dolmen is merely the core of a chambered tumulus.

A megalithic monument of quite exceptional character

[1] See Borlase, *Dolmens* i, at pp. 19, 294, and 240 respectively: illustrations copied from JRSAI xxi p. 265. See also PRIA iv. p. 368.

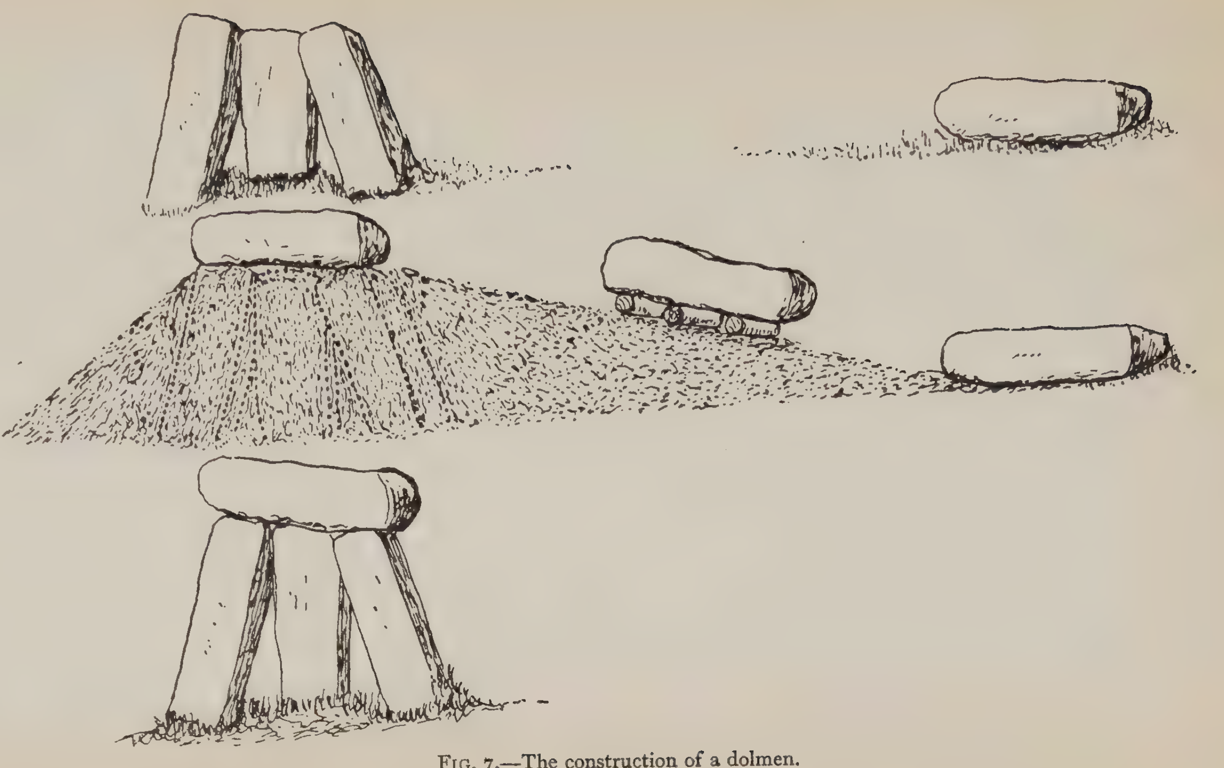


FIG. 7.—The construction of a dolmen.

exists near the town of Sligo, in a deer-park about three miles away. It goes by the name of *Leac Chon mhic Ruis*, the "Stone of Cu son of Ros"—whoever he may have been. It is composed of comparatively small stones, none of them standing more than 3 feet or so above ground: to speak of it as "the Irish Stonehenge," as some guide-books do, is to commit a gratuitous and more than usually foolish solecism. The long axis of the structure lies east and west. It consists of a central area out of which three subordinate chambers open, one at the western end, and two at the eastern. The central chamber is 50 feet long by about 25 feet wide—the exact width varies, as the sides are neither straight nor parallel. The subsidiary chambers are entered by trilithon doorways, 3 feet high and the same in width; they are 20 to 22 feet in length and 6 or 7 feet in width, and are each divided into two parts by pilasters projecting from the sides. Excavations made here from time to time have revealed fragments of human and animal bones, none of them displaying any marks of fire, and a few chips of flint: some of the bones are said to have been contained in small cists, but there is no plan or detail of them in the very unsatisfactory paper where this work is recorded.[1] There can be no doubt that this is a wrecked tomb-sanctuary; the central chamber was probably always open to the sky, while the subsidiary chambers were roofed and closed.[2]

Another exceptional structure at Louisburg (Mayo), is briefly described and figured by G. H. Kinahan. It seems to be a cist, about 13 feet in length and 5 feet across, formed in the usual way by slabs on end; but instead of a cover-slab, there are a number of flagstones laid in a sloping position on both sides, in three layers; horizontal stones once lay across the tops of the sloping stones. The structure, whatever it may be, is unique in Ireland, though there are foreign parallels.[3]

4. Burials in tumuli differ from the earth-burials described above in Nos. 1, 2, in that the body, burnt or unburnt, is deposited in the heart of an artificial mound, with or without a cist enclosing it, and is thus raised above the natural surface

[1] S. F. Milligan, "Recent archæological explorations in Co. Sligo," BNHPS 1886-87 p. 40.

[2] For a well-illustrated description of this monument see E. T. Hardman, "On a remarkable megalithic structure near Sligo," JRHAAI xv p. 57. See also IPCT p. 305 ff.

[3] G. H. Kinahan, "New (?) type of Clochaun . . . southward of Louisburg, Co. Mayo," PRIA xv p. 69. The illustration is reproduced in Borlase, *Dolmens*, vol. i p. 124, who refers to a similar structure at Monte Abrahão in Portugal. For this see a rather rough drawing in *Matériaux pour l'histoire de l'homme* xvii p. 463 —there taken from a Portuguese publication. The resemblance between the two structures is certainly noteworthy. Another very similar structure at Igé (Saône-et-Loire), France, is illustrated in *Revue de l'École d'Anthropologie* xv (1905) p. 221.

of the ground. In some cases there is a combination of the two processes, the body being buried in the earth, and a mound erected over the grave.

The tumulus of Knockmaree (Dublin), in the Phœnix Park, though commonly attributed to the Stone Age (and described as such in IPCT p. 313) is more probably of the Bronze Age. The mound was about 15 feet in height and 120 feet in diameter. The principal cist (which has been re-erected in the Zoological Gardens of Dublin) was about 4 feet in length and 2 feet in depth, and consisted of a flat stone supported by others. It contained the unburnt remains of three persons, along with a bone object—a rod of bone about 2½ inches in length, with a hemispherical expansion at each end, called, without much justification, a fibula—and a necklace of shells of *Nerita littoralis*, strung ingeniously on a cord made, it is said, of seaweed.[1] Urns of bronze-age types containing ashes were found in subsidiary cists inside the tumulus, probably belonging to secondary interments.[2]

The description of the opening of a similar tumulus is borrowed by Henry O'Neill from a newspaper account, which is as unsatisfying as such reports usually are.[3] This was at Tullydruid (Tyrone). The tumulus was a flat-topped hill. The enclosed cist had a cover stone which the report describes as "immense"—a word that conveys no scientific meaning. Inside the cist was a skeleton in a sitting posture. At the knees of the skeleton there was a "moulded and gracefully swelling" urn, again a description that conveys no exact information, any more than the further [rash !] statement that the skull was "of a fine Celtic type"—an expression which is mere nonsense. It is deplorable that persons who cannot record their observations better than this are permitted to play havoc with important ancient monuments !

At Lochlochan, Brochshane (Antrim), there was a carn which at one time had a standing stone on the summit. The same feature, which is far from common, distinguished the chambered tumulus of New Grange. The Rev. Canon Grainger, the rector of the parish, in vain sought permission of the owner of the soil to ransack it in the interests of his collection of antiquities; the owner professed to be deterred by superstitious fears. His son, however, was not so troubled, and when he inherited the property he sold the stones for road-metal. In the course of removing them, three cists were found. No one was at hand to superintend the work. A skull was discovered and broken up "in the interests of science"

[1] Wilde, *Catalogue* p. 183 : reproduced in IPCT *loc. cit.*
[2] PRIA i p. 186 ff. : JKAS ii p. 43.
[3] JKAS ii 44.

by two medical students. Two urns were found; one of them was unique in Ireland in that it was a food-vessel provided with ear-handles. This was purchased by Rev. Dr. Buick; from him it passed into the Knowles collection, and thence to the museum of Belfast. Some jet beads are also said to have been found; but though Dr. Buick made a praiseworthy effort to put on record what was discovered,[1] he had to depend upon the testimony of unscientific workmen, and this can hardly be considered satisfactory.

At Ballybooley (Antrim), there was a carn with a cist contained within it, which has been described by G. H. Kinahan.[2] But the author of this paper has been so much occupied in developing an imposing but cumbrous terminology of his own invention that he has missed the most interesting feature of this cist: the manner in which the two outer stones are turned sideways, making an entrance reminiscent of the Sardinian *Gigantea*. We shall find another analogy to these monuments shortly.

At Oldbridge (Meath), a cist divided longitudinally into two by a stone in the middle (which did not reach to the top stone) was found, embedded within a small mound. In both divisions there were decomposed bones, of which but little could be made; in one side was a jet necklace with triangular pendant—to this object reference has already been made—and in the other a food-vessel of the bowl type. If the two skeletons could be proved to have been of opposite sexes, we should probably have here a case of *sati*.[3]

Sometimes a cheap tumulus was secured by making use of an already existing esker-ridge or other natural mound. At Toam and in Killicarney (both in Cavan), there were mounds which were destroyed in the process of laying-out a railway. The first was cut through by the railway track, the second was demolished by the engineers in search of ballast. The discoveries incidentally made are reported by Wakeman.[4] Both mounds seem to have been eskers, with an outer covering artificially added. The first mound had been pitted with small hollows before this addition was made; each hollow contained the ashes of burnt human bones, with fragments of pottery. The hollows were covered, but apparently not lined,

[1] "The giant's grave, Loughloughan, Broughshane, Co. Antrim," JRSAI xxxii p. 163.

[2] "On antiquities in the neighbourhood of Drumdarragh, Co. Antrim," JRHAAI xiii p. 374, especially p. 377.

[3] G. Coffey, "On a double-cist grave and remains recently discovered at Oldbridge, Co. Meath," PRIA xix p. 747.

[4] W. F. Wakeman, "On some recent antiquarian discoveries at Toam and Killicarney, near Blacklion, in the county of Cavan," JRHAAI xv p. 183.

with flagstones; one of these stones had scratches upon it, which were rather absurdly taken for Ogham characters. The made earth, covering these pits, had a large number of skeletons, evidently the remains of later secondary interments; unfortunately no one competent to examine this rich collection of anthropological material was at hand, and they were lost to science. With them were pig bones. The same association has been found in Hallstatt tombs in Bavaria,[1] and in all probability the secondary interments were of the Iron Age. The second mound contained three stone-lined cists, in each of which were fragments of pottery and some small objects, including a polished stone axe-head and a fragment of a bone plate for decorating a belt. They are figured in the description published by Wakeman. It must be remarked that this paper, though lengthy and diffuse, succeeds in evading many interesting questions which it is now impossible to answer.

For the deposition of made earth upon the surface of a natural hillock, comparison may be made with an enigmatical site in the demesne known as "Old Connaught," near Bri Chualann (Wicklow). The finds made here are described by Wakeman; [2] but the nature of the deposits leaves it uncertain whether we are here concerned with a sepulchral or with a small village site. Human bones were found, but we are not told how they were disposed. There was a number of broken potsherds, apparently of domestic vessels, one of them bearing marks of having been used for cooking. There were also fragments of moulds, in stone and in clay; one of the fragments, of clay, seems to have been intended for casting a leaf-shaped sword, which would put the date of the deposit back farther than some of the finds would suggest. There were ornaments—beads and pendants—in plain limestone, as well as some perforated periwinkle-shells. One flat plate of stone, measuring, according to Mr. Wakeman's scale, 6 inches by 5 inches, had three roughly engraved squares placed concentrically, with other lines crossing them—apparently a board for some game like chequers. There was no iron, apparently; but the few pieces of bronze possessing any character do not look very old. All these objects were contained in a layer of artificial earth deposit on the top of an esker-ridge.

A very remarkable tumulus burial at Dysart (Westmeath), is described by Dr. Dillon Kelly.[3] The description, which is

[1] J. Naue, "L'époque de Hallstatt en Bavière," *Revue archéologique*, Series III vol. xxvii p. 40, esp. p. 44.

[2] W. F. Wakeman, "On a recently discovered pagan sepulchral mound in the grounds of Old Connaught, near Bray, Co. Dublin," JRSAI xxiv, p. 54: xxv p. 106.

[3] JRHAAI xiv p. 178.

rather verbose, may be summarized thus. The tumulus was half-pear shaped, 6 feet high at the southern end: the plan was oval, the long axis 26 feet, north to south; small limestone boulders surrounded the base of the mound for about two-thirds of the circumference. Inside there were two cists, east and west: the eastern cist contained the skeleton of a brachycephalic subject, aged about 60 years; the western cist contained the bones of a dolichocephalic subject, about 30 years of age. Both appear to have been men. They were deposited in a sitting position, and an urn, the decoration of which is rather summarily described, was placed on the lap of the second interment. There were no other deposits in the cist. Above the western cist were the calcined remains of a youth of about 12 years. These must have been burnt on the spot after the cists were closed, for the earth surrounding the western cist was full of ashes, and the tops of the skulls of the interred skeletons, which must have been in contact with the undersides of the covering slabs, shewed traces of the baking which they received in the fire. The ashes over the western slab were covered with an additional slab laid over them. It is remarkable that although the region in which this monument was situated was limestone, all the constructions were of sandstone.

Probably in the majority of cases the cist was constructed first, and then the stones were heaped over it. But at Annaghkeen (Galway), a carn was opened in which the bottom of the cist was raised 2 feet above ground, the carn having been partly built before the cist was constructed.[1]

Carns containing more than one cist are not very common. The type, however, is well recorded: two examples, at Mount Stewart (Armagh), and at Greencastle (Tyrone), are described in IPCT pp. 346-8, and the description need not be repeated here. It may, however, be remarked, that the Greencastle carn was in the shape of a ring, with a passage giving admission to the centre, and with a number of small cists contained within the surrounding structure. This presents some analogy to the Deerpark monument described above, in that it has an open space in the centre, where rites in honour of the dead could be performed.

Another carn with multiple cists at Trillick (Tyrone) is described by Wakeman.[2] This was a heap of stones 8 feet high and 40 feet in diameter. Round the margin, resting on the earth and covered by the stone heap, there were eight small

[1] T. B. Costello, "Discovery of a sepulchral cist in Annachkeen Cairn," JGAHS v p. 159.
[2] JRHAAI xi p. 579.

cists, equidistant from one another. Four of these contained bones (one of them of two persons), and two of these four had each a handsome urn. The other cists were empty. No other objects, except a broken flint knife, were found. A similar carn exists at Bighy (Fermanach).[1]

One of the most singular monuments of this kind is at Doohat (Fermanach): a carn with a plan in the shape of a five-pointed star, having a cist of slabs, subdivided into two parts, in the middle. There are also fifteen subordinate cists in the star-points. The carn was excavated by Mr. Wakeman, who gives a description.[2] It seems to have been rifled in ancient times, as nothing was found within it.

5. Burial in caves, natural or artificial, is not unknown, but it is rare, and few examples are on record.[3] A very remarkable succession of sepulchral chambers at Clochane, near Ventry (Kerry), has been described in a report too brief and condensed to be fully intelligible.[4] There is a lintelled entrance, with a concave portico, once more reminiscent of the *Gigantea*, which gives admission to a rectangular chamber 12 feet by 4 feet. The entrance is at the western end of the south side. At the eastern end of the northern side is an opening leading into a succession of three chambers, respectively 9, 14, and 13 feet in length, in the third of which human bones were found. The last of these three chambers is also the second of a series of six chambers running in a curved line more or less S.W. and N.E. Human remains, and a number of flagstones, supposed to close the entrance to further chambers, were found in the fifth of these. The chambers are said to be shaped like inverted canoes, lined with stones, and roofed with flags.

6. The most important burial-places in Ireland belong to the group known as chambered tumuli. These differ from the cist tumuli just described in that they are provided with an entrance-passage by which the tomb-chamber may be entered from time to time, either for the purpose of religious rites, or else for the simpler purpose of adding fresh interments.

Though there are numerous varieties of detail, there is a general similarity of plan in the Irish chambered tumuli. Inside the mound—but not necessarily at its mathematical centre—there is a chamber formed of great blocks or flags of stone,

[1] JRHAAI xvi p. 169. [2] JRHAAI xvi p. 162: reproduced IPCT p. 346.

[3] A good example is an urn-burial of two persons, male and female (presumably a case of *sati*) in the cave of Knockninny (Fermanach). See PRIA xii p. 465, xv pp. 329-38. Very little can be said in explanation of the numerous deposits of human bonesfound in the cave of Dunmore (Kilkenny).

[4] Sir T. N. Deane, "A report on ancient monuments in Co. Kerry," PRIA xix p. 100.

with a number of burial recesses in its sides. These are usually three in number, making with the entrance passage a cruciform plan. The entrance passage runs through the structure to the outside of the mound; it was closed either with a slab or, perhaps more commonly, with a heap of stones.

The size of such tumuli ranges from the colossal proportions of New Grange (the chief monument of the cemetery of Brugh), which covers an acre of ground, to small mounds of 60 to 100 feet in diameter. In most cases the tumuli are carns, piles of dry stone; but earth is intermingled with the stones in some of them, as at New Grange and the neighbouring mound of Dowth.

The cemetery of Brugh is situated on the Boyne river, about five miles upstream from Drocheda. The river here makes a great bend, sweeping round a tongue of land about three miles in length and one mile in breadth: this area is entirely covered by the cemetery. At its entrance, as we approach it from the Drocheda end, there is an enclosure of earth, resembling a huge ring-fort, but more probably to be explained as a kind of theatre in which some of the burial rites could take place in the presence of a large number of spectators. Not far from this ring is the mound of Dowth, one of the three largest mounds in the cemetery. Dowth is unique in that it contains two sets of chambers; one of these is of the orthodox cruciform plan, but with a subsidiary passage opening out of one of the side recesses; the other is circular, with an ante-chamber opening out of it. Many of the stones in both groups of chambers bear sculptured symbols; but to give an exhaustive description of this and similar monuments here would consume far too much space.[1]

About a mile from Dowth is New Grange, a mound of about the same size as Dowth. It has but one chamber, so far as is known.[2] A circle of large standing stones surrounds this mound, once probably about thirty-five in number, if we may assume the interspacing to have been uniform, but now reduced to twelve. Around the mound itself there runs a kerb of large flat stones on end, each about 10 feet long, some of which are decorated with sculpture. The kerb-stone under the entrance, and a narrow flat stone above it, are rare examples of the admission of rhythm into the bronze-age sculptures on stone. The entrance passage is well built, with stones, carefully selected and dressed smooth by pocking; some of these bear sculpture. The chamber itself, unlike other tumulus

[1] Reference may be made to Coffey's monograph, already cited.
[2] Notwithstanding a statement to the contrary in JRSAI xxiii p. 213.

chambers, is not strictly megalithic in construction; it is built of stones of considerable, but not excessive size, each course projecting slightly in front of that next below, until the opening above is small enough to be bridged by a single stone. In front of this construction there is ranged a series of large slabs on edge, but these are not constructional, except in the subsidiary burial recesses. They are richly sculptured. When the mound was first opened in modern times (in the year 1699), there was a menhir (which had fallen prostrate in the centre of the burial chamber), and another on the summit of the hill.[1] These have both disappeared.

In addition to these two great mounds, there is a third, Knowth, and also a number of smaller tumuli as well as standing stones and other monuments scattered through the cemetery area.

In the north of the same county of Meath there is another series of chambered carns of great importance, occupying the hills known as Sliabh na Caillighe, "The Hag's Mountain," otherwise called Lochcrew, from a small lake of that name at the foot of the range. No mound of this series can compare in size with the tumuli just described. The series derives its importance, not from the imposing grandeur of the monuments, nor from their good preservation (for they are in a most deplorable state), but from the wealth of symbolic sculpture in their chambers. There are in all about twenty-five carns on the summit of the mountain ridge, and when these were perfect they must have presented a very striking appearance against the sky-line. They were rifled of their contents, however, at a very early date. This is indicated by the fact that the scanty remains found within them shew evidence of two periods of occupation. The first dates from the Bronze Age, when the carns were first erected to serve as sepulchres; a few objects of little intrinsic worth (such as fragments of bronze and small stone beads) remain from this period. The carns were afterwards cleared out by thieves, perhaps before the Bronze Age came to an end; and in the Iron Age they were adopted as huts by a colony of artificers. These people left behind them a large number of slips of bone, upon which they had traced designs, unmistakably of the La Tène style, intended for subsequent transference to metal objects. After their

[1] Molyneux, "A discourse concerning the Danish mounts, forts, and towers in Ireland" (Dublin 1725) p. 203: Letter dated 12 March $\frac{1699}{1700}$ from Edward Lhwyd in Rowland's *Mona Antiqua Restaurata* (London 1766) p. 314. These stones had already disappeared in 1770, when Governor Pownall described the monuments. See *Archæologia* ii p. 253.

departure the carns lay derelict, and their stones were removed piecemeal for building field fences and for similar purposes. Only three of the series remain, in any sense of the term, intact. About the middle of the nineteenth century they attracted the attention of Eugene Conwell, an inspector of schools in the neighbourhood, and he conducted excavations which, all things considered, were very creditably carried out, although he was misled by ill-judged attempts to identify the owners of the monuments with mythical personages in the legendary history of Ireland. After his time they again fell into neglect, and at the moment of writing are much overgrown with weeds.[1]

There are in all about a hundred slabs in the series of carns bearing carving—by far the largest collection of Bronze Age stone sculpture in existence. The decoration consists of circles, curves, linear patterns of various forms, and a number of nondescript composite figures. No natural forms are reproduced, although it is possible that some of the figures are degenerate representations of such forms, conventionalized out of recognition. On one stone, which is the sole survivor of a carn, there is what may possibly be an attempt to depict the sun with its rays breaking through a cloud, or, possibly, a falling shower of raindrops.

In contrast to this series of carns, the otherwise very similar series at Carrowkeel (Sligo) shews no attempt at decoration or symbolism whatever.[2] But, on the other hand, this series of monuments succeeded in escaping the spoiler, and for the greater part preserved their contents until they could be examined scientifically. They are thus of great value in informing us of the nature of the burial deposits which were placed in monuments that have been rifled in ancient times.[3] In plan the Carrowkeel carns were similar to those of Lochcrew

[1] See E. A. Conwell, *Discovery of the Tomb of Ollamh Fodhla* (Dublin 1873): *Idem*, "On the identification of the ancient cemetery at Loughcrew, and the discovery of the tomb of Ollamh Fodhla," PRIA xv p. 72: W. Frazer, "On a series of coloured drawings of scribed stones in the Lough Crew cairns," PRIA xvii p. 451: *Idem*, "Notes on incised sculpturings on stones in the cairns of Sliabh-na-Calliaghe (*sic*) near Loughcrew, Co. Meath, Ireland, with illustrations from a series of . . . sketches by the late G. V. du Noyer," *Proceedings Soc. Antiqu. Scot.* xxvii p. 294: G. Coffey, "Notes on the prehistoric cemetery of Loughcrew, with fasciculus of photographic illustrations of the sepulchral cairns," TRIA xxxi p. 23.

[2] For a full account of the exploration of these carns see PRIA xxix p. 311.

[3] No chronological importance can be attached to certain gold ornaments alleged to have been found outside New Grange, and exhibited by Lord Albert Conyngham (afterwards Lord Londesborough) to the Society of Antiquaries of London in 1842 (*Archæologia* vol. xxx p. 137). They are clearly a heterogeneous collection of very different periods, and the statement that they were found at New Grange was probably a falsehood, designed to increase their commercial value.

or the Brugh cemetery. They were heaps of stone, about 20 feet in height and 70 feet in diameter, more or less, with chambers, usually cruciform, made of large stones inside them. The side recesses of these chambers were the burial places, but the burials were by no means confined to them, but were also deposited on the floor of the main chamber.

As a rule the bodies were cremated; only a few unburnt bones were found. Very seldom were the ashes placed in urns, and the urns that were used were of the "food-vessel" type, not the large cinerary urns. The majority of the ashes were heaped on flat stones, about 8 inches in diameter, which were then deposited in the burial recesses. With them was usually a pin made of an animal's bone, evidently the fastening which secured a cloth bag in which the ashes were collected after the burning. The deposits of grave-goods were few in number and poor in quality. Small beads and pendants of limestone, tusks of wild boars, probably worn as amulets, balls of white quartz—these were the sum of the deposits. Not a scrap of metal was found anywhere.

One of the carns, lettered F by the explorers, was remarkable in that it contained *two* chambers, hexagonal on plan, one behind the other. These were built of very large stones. At the back of the inner chamber there was a small standing stone, and near it were found a number of smooth waterworn baetyls. Exactly similar stones are on record as having been found inside New Grange when it was first opened.[1]

Another carn was remarkable for its shape, which was long and narrow (120 feet by 35 feet), not circular on plan like all the others. At one end was a false entrance represented by projecting horns, and lined with slabs. At the other end was the burial chamber; between the two there was nothing but a stone bank. Most certainly this monument is cognate with the horned long barrows of England, and shews a late survival of this type of burial structure; but why it should be intruded on a cemetery of carns of the circular shape is a question more easily asked than answered. There was nothing distinctive in the burial deposits which it contained.

Another of the series was a cenotaph. It was merely a conical pile of stones, and though the excavators demolished it to the foundations, they found nothing whatever within it. It must have been built to give a semblance of burial to some important person who had died in such circumstances that his body could not be recovered; thus illustrating the importance which the bronze-age folk attached to burial as a means of

[1] They are illustrated in the plate accompanying Molyneux's description above quoted: reproduced IPCT p. 356.

securing the repose of the dead. After the excavation, the carn was restored to its former shape and size. A similar cenotaph seems to exist in the Lochcrew series.[1]

At Annachclochmuilinn (Armagh) there was a most important sepulchral monument which has, however, been entirely destroyed. We know of it only from very rude woodcuts in some of the older works of Irish archæology, such as those of Vallancey and Betham, and an engraving undated: these are scarcely compatible one with another, and it is very difficult to form an idea of what the monument actually looked like. The attempt, however, must be made, for it was of very special interest. The monument was an oval mound, measuring 44 yards by 24 yards. Excavations made in 1791 revealed a curved portico, exactly resembling that of the Sardinian "Giants' Graves," and undoubtedly belonging to an analogous civilization. A well-built doorway in the middle of this curve, flanked apparently by pillar-stones, led into a passage the length of which is given as 19 yards, the height as 7 feet, and the breadth 8 or 9 feet—but these figures are stated so vaguely that it is impossible to be certain about them. The passage was divided into four sections, by means of jambs projecting from the sides, supporting lintels at a height of 4 feet from the floor. A small urn was found, of a singular form, if we may judge from the very rude woodcut in Betham's *Etruria Celtica*. The destruction of this monument was a most deplorable crime against the interests of the entire nation, and its destroyer has richly earned the execration of all later generations.[2]

7. *Jar-burials.*—As yet only one example of this form of interment is recorded from Ireland: but it is of great importance, as it is one more link between Ireland and Spain, at least as suggestive as the Clonfinloch stone. Jar-burials were common in the El Argar cemetery, explored by the brothers Siret: and they are known in the Eastern Mediterranean, and as far away as Bohemia.[3] This is not the place to discuss the general question of the origin of this method of sepulture: but the one isolated Irish example is necessarily of extraordinary historical importance. It is recorded by Smith, the historian of the county of Cork,[4] in words which it is well to transcribe *verbatim*: "In the year 1737, three large urns were

[1] On the subject generally, see G. Coffey, "Prehistoric cenotaphs," PRIA xx p. 16.

[2] See Borlase, *Dolmens* vol. i p. 301, and references there. See also JRSAI xxxix p. 203, *Archaeologia* xv p. 408.

[3] See Déchelette, *Manuel d'Archéologie*, vol. ii part i pp. 82, 83.

[4] Charles Smith, *The Ancient and Present State of the County and City of Cork* two vols. (Dublin 1750). The extract here given is from vol. ii p. 403.

discovered near Castle Saffron, the estate of John Love, Esq.,[1] placed in a kind of triangle in the earth, about 100 yards from a Danish intrenchment; they were made of a fine clay dried by the fire, which soon mouldered in the air, each of them might contain about sixteen gallons, their shape is represented [in the annexed Fig. 8 copied from Smith's plate]. They had a rude kind of carved work round the rims, which were about 16 inches diameter, as was also the bottom, but the middle of the side about 2 feet, and each urn was 4 feet high. In one of them was the skeleton of a man, the ribs and smaller bones were bundled up and tied with a copper wire, rusted green, as were those of the thighs, arms, etc., and the skull was placed near the mouth of the urn; none of these bones had passed the fire.[2] In a second urn was found a substance like honey, supposed to be the flesh, and in the third was a small quantity of copper pieces, as large as halfpence[3] but of an irregular shape like clip'd money, void of any inscription or stamp."

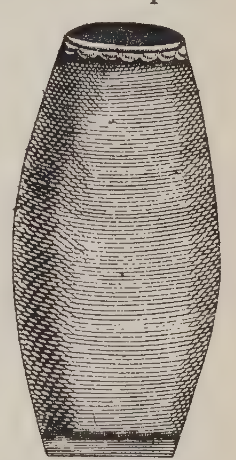


FIG. 8.—The Castle Saffron jar.

We cannot blame Smith for the ignorance inseparable from his time, which makes the description quoted above extremely unsatisfactory, in view of the importance of the deposit in question. We must rather in shame admit that if the discovery had been postponed to our own time, it would have run a very serious risk of being unrecorded altogether, or else of being described in terms no less unscientific. We can but hope that further discoveries will be made to tell us something more about the immigrant Mediterranean people who deposited their dead at Castle Saffron with their ancestral rites.

A most valuable monograph could even now be compiled from all the scattered notices of ancient burials which have been found and recorded in Ireland. In a work like the present it is impossible to select more than a few typical examples: I had noted many others which cannot find a place here.

[1] Castle Saffron is situated in the barony of Fermoy and parish of Doneraile, in the north of the county (R.A.S.M.).

[2] In a footnote Smith here happily compares the burial customs of the Balearic Islanders, as recorded by Diodorus Siculus, v 18.

[3] A halfpenny in Smith's time measured nearly 1¼ inch in diameter.

CHAPTER III

THE IRON AGE

Preliminary

THE Pre-Celtic bronze-age folk had succeeded in attaining to no contemptible degree of culture and of social organization before their undisturbed tenure of Ireland came to an end. That civilization was crushed out by the "Celtic" incomers, greedy for the store of gold which the country was understood to possess. But though in course of time the invaders subdued the country to themselves, they did not, for a long time, succeed in securing a comfortable tenure. The aborigines were ever on the watch to recover their lost ground. Legend tells us of at least one great insurrection, captained by a certain Cairbre "the Cat-headed," which the annalists believe to have taken place in the year A.D. 9. Although the recorded details of this event obviously belong to the realms of romance, there is no reason to doubt that the story possesses at least a germinal authenticity.[1] In the first centuries of the Celtic occupation, the equilibrium of society must have been unstable.

In consequence of this, the relics of the pagan Iron Age which survive, so far as they are known, are neither so numerous nor so noteworthy as are those of the Bronze Age which preceded it, or of the Christian period which followed it. Nevertheless, rightly understood, these relics are of a particular importance. They belong to the interesting time when folklore is merging into dawning history. In this period, as we shall see in the following chapter, the foundations of Irish literature were being laid. No other literature has come down to us in Northern Europe having its roots in a time and in social conditions so remote. Here, if anywhere, we may expect to find a picture of the life, the thoughts, the manners, the customs, the beliefs, of the people of Cisalpine Europe [2] during

[1] It is adversely criticized by Professor MacNeill, *Celtic Ireland*, chapter v: but in *Phases of Irish History*, p. 119, he admits that there is no inherent improbability in a plebeian revolution.

[2] I use here the word "Cisalpine" with its proper relative sense, which for us it has unfortunately lost by having been transferred unintelligently from Latin into English.

the centuries immediately preceding and following the Christian era. The fragments of the ancient literature that survive, much modified though they be by the operations of later editors and scribes, may be set beside the tangible relics of the civilization of the period, in the confidence that they will serve for illustration and commentary, each of the other.

Before describing these relics, it may be well to remind the reader that the Iron Age of the European continent is divided by archæologists into two periods, which again are subdivided both provincially and chronologically. The main divisions are called the periods of *Hallstatt* and of *La Tène*. The first is named after the site of a famous cemetery in the Salzkammergut, and is dated about 1000 to 500 B.C. The second is named after a military station lying at the outlet of Lake Neuchâtel. As the Hallstatt period is practically unknown in Ireland, it is needless here to trouble the reader with its complex subdivisions.[1] The La Tène period falls into three successive stages, called respectively La Tène I (500-300 B.C.), La Tène II (300-100 B.C.), La Tène III (100 B.C. to A.D. 100). Each of these primary and subordinate divisions display local peculiarities in different regions of Europe, for which, however, reference must be made to special treatises, such as Déchelette's *Manuel d'Archéologie*.

The Transition of Bronze to Iron, and the Hallstatt Period in Ireland

The Hallstatt civilization, as we have just said, is practically unknown in Ireland. We cannot tell what future discovery may bring to light ; the same would have been said of England prior to the discovery, in 1911, of a very late Hallstatt settlement at All Cannings Cross in Wiltshire.[2] Nothing can be assumed against the possibility of such a discovery being made in Ireland ; although it may fairly be remarked that it would prove subversive of all the theories of occupation that have been forming themselves on the basis of the knowledge hitherto acquired, and that seem to fit the facts so far as they are known. The theory which at present holds the ground, and which is adopted in this book, may be stated thus. The Stone Age and the Bronze Age shew a continuous population in Ireland, by an aboriginal race ; of language unknown, but most probably *not* Celtic, and quite possibly not even Indo-European. There may have been occasional settlements of foreigners

[1] Particulars about these will be found in M. Hoernes, "Die Hallstattperiode," *Archiv für Anthropologie* xxxi p. 233.

[2] M. E. Cunnington, *The Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire* (Devizes 1925).

among them, but not enough to disturb the racial uniformity. The Iron Age, on the other hand, was introduced abruptly at some time in La Tène II, by a movement of Celtic peoples on the Continent. It is reasonable to consider this immigration as only one aspect of a time of unrest in the Continent; the movement southward at about the same time, which culminated in the sack of Rome by the Gauls, was another incident in the same groups of transactions.

Consequently we cannot expect to find indigenous Hallstatt and La Tène I cultures in Ireland; and these are, in fact, absent. A few stray objects are all that have been found, which have made their way into Ireland, more or less accidentally. The late Mr. E. C. R. Armstrong, who at the time of his death was engaged on a work on the Iron Age in Ireland,[1] enumerates the following as being all the objects of Hallstatt type which he had been able to find on record :—

One large iron sword.
About twenty-four bronze swords.
Seven winged scabbard-chapes.
Seven bucket-shaped cauldrons.
Between fifteen and twenty riveted bronze vessels.
A similar iron vessel.
Fragment of a gold cup.
A gold band, and some ribbons of gold.
Two flesh-hooks.
Two shields.[2]

This preliminary list he afterwards expanded into a description of the principal objects enumerated, with illustrations.[3]

It will strike the reader immediately that these are just the kinds of objects that are most likely to be transferred from one country to another by way of trade. Especially conspicuous is the absence of pottery from the list. Metal objects can pass from hand to hand across a Continent without suffering injury, but this is hardly true of a fragile material such as pottery. It follows that the distribution of types of metal objects need not coincide with the distribution of types of metal-workers: but the distribution of types of pottery almost necessarily implies a similar distribution of types of pottery-makers. Thus, no matter how much Hallstatt metal may be found in any country, the absence of Hallstatt pottery strongly weighs the balance against the presence of Hallstatt people.

[1] The extant fragments of this work have been published by the Royal Society of Antiquaries of Ireland *Journal*, liii p. 1, liv pp. 1, 109.

[2] E. C. R. Armstrong, " Note on the Hallstatt period in Ireland," *Antiquaries' Journal* ii p. 204.

[3] " The early Iron Age or Hallstatt period in Ireland," JRSAI liv pp. 1, 109.

Swords.—The bronze swords of the Hallstatt period (Fig. 9 *a*) resemble superficially the leaf-shaped swords of the end of the Bronze Age, but are distinguished from them by the absence of a midrib running down the axis of the blade, which is either plane or *hollowed :* and also by the shape of the end of the tongue to which the hafting-plates are riveted. In the Bronze Age this is triangular or fish-tail shaped ; in the Hallstatt period it is of a half-hexagon shape, or of a form resembling a capital Y.[1] The hafting-plates, which were of wood or of bone, have all perished in the extant examples. The rivets still remain in some cases : a number of them have cup-shaped heads, it is supposed to receive an ornamental button of enamel, of which, however, no trace remains in the Irish examples. There is such an enamelled rivet in a sword preserved in Paris.[2]

It is conceivable that the " four or five bronze swords " leaf-shaped, measuring 12 to 18 inches in length, which were found in deepening the river Eoir (Nore) at Shanagoonagh Bridge were Hallstatt blades, if their association with a " conical iron helmet " was not a mere accident.[3] It is one of countless discoveries of which we know everything but what is essential.

The form of Hallstatt sword in which two antennæ rise from the top of the handle, forming a figure resembling a capital U, is unknown in Ireland.

The one *iron* sword mentioned in Armstrong's enumeration was dredged up in the Shannon above Athlone (Westmeath) in the year 1847, and is now in the Royal Irish Academy's collection. It was identified and published as of Hallstatt type by Coffey,[4] when he had charge of the collection. The specimen is so badly injured by corrosion that it requires much close attention to recognize any characteristic features in it at all ; the chief mark of distinction is a ridge running down the axis of the blade. Only the stump of the tang, with one rivet-hole, remains, and there is only a very small portion of the edge surviving. The total length remaining is 18½ inches. It is to be hoped that the identification will be confirmed by the discovery of other and more satisfactory specimens.

Bucket-shaped cauldrons (Fig. 9 *b*), made of plates of bronze, riveted together, are undoubtedly of Hallstatt type. That they were highly valued, in due appreciation of the skill

[1] Wilde, *Catalogue* p. 444 Figs. 319-21.
[2] Armstrong in JRSAI liv p. 119, quoting Mr. W. Parker Brewis.
[3] JKAS i p. 30.
[4] G. Coffey, " Early iron-age sword found in Ireland," PRIA xxvi p. 42. The great importance of the typology of the sword in European Archæology is emphasized in Harold Peake's elaborate study, *The Bronze Age and the Celtic World* (London 1922).

involved in their manufacture, is shewn by the fact that whenever a hole was accidentally made in one of them it was care-



FIG. 9.—Iron-age objects.

fully patched with a disc of metal riveted over the injury.[1]

[1] A specimen truly described as "much mended" is figured in PRIA xxii p. 285.

Usually two loops, containing free metal rings to form handles, are attached to the rim.

There is some evidence that cauldrons such as these were treated as media of exchange for the payment of large values. A legend of St Patrick turns upon his having been betrayed by a treacherous host for a cauldron of bronze; and later we read in the same document of a cauldron being bestowed upon the saint as an act of homage.[1]

Besides the bucket-shaped cauldrons there is a number of vessels of a globular or hemispherical shape, but the period to which they are to be assigned is uncertain. Usually the rivets are conical in shape; it is also to be observed that they are not always functional, but are sometimes merely ornamental. Armstrong figures several vessels of this type,[2] including one of iron—an unusual material—globular in shape and formed of riveted plates, found at Drumlane (Cavan). A fine specimen from Urlingford (Kilkenny) is of such thin metal that although it would hold about 20 gallons its weight is only 6 pounds.[3] Dr. Costello describes one from Cloonascarach Bog, near Tuam (Galway), which has an everted lip (as is often the case), in this example strengthened with a ring of alderwood, round which the metal has been turned; it has two movable handles.[4]

The most remarkable hoard of bronze objects as yet found in Ireland was a hoard discovered close to Loch Cowra, north of Birr (Offaly), somewhere about the year 1823. There is some uncertainty about the circumstances of the find, for the peasants from whom the chief objects were purchased pledged the purchaser to secrecy during their lifetime; so that only vague notices of individual specimens in the *Dublin Penny Journal* were allowed to get into print.[5] The first authoritative notice of the find was presented to the Royal Irish Academy in November 1848,[6] by Rev. Dr. Robinson, who says that the find was made sixteen years before in the townland called Doorosheath, near Whigsborough. This is a small triangular area of land a little to the right of the middle of sheet 30 of the 6-inch map of Offaly. But in December 1849, Mr. T. L.

[1] *Lives of Saints from the Book of Lismore*, ed. Whitley Stokes, lines 194 ff., 556 ff. See further to the same effect R. A. S. Macalister, *The Latin and Irish Lives of Ciaran*, pp. 21, 62.

[2] JRSAI liv p. 112 ff. See also S. F. Milligan, "On Crannogs in Co. Cavan," JRHAAI xvii p. 148.

[3] JKAS iii p. 131.

[4] JGAHS xi p. 72. Other cauldrons are recorded from Antrim (JRHAAI xiii p. 20), Armagh (JRSAI xxvii p. 437), Down (UJA I v p. 82), Longford (JRSAI xxix p. 256), and not a few other counties.

[5] B., and P[etrie], "Ancient Irish bells, or crotals," *Dublin Penny Journal* 18 May 1833 p. 376; P[etrie], "Ancient Irish trumpets," *ibid.* 27 July 1833 p. 27.

[6] PRIA iv p. 137.

Cooke, of Birr, who had purchased a number of the objects, and who claimed to have "inside knowledge," said that the find had been made much earlier, about twenty to twenty-five years before; and that it was not found on Doorosheath at all, but by men trenching potatoes "on the extensive townland of Dowris". There is, however, no such townland, either in this neighbourhood, or anywhere in Ireland; there are thirteen which the Ordnance Map calls *Dooros*, with slight modifications of spelling, but not one of these is in Offaly. The potato-diggers were working (he goes on to say) on that part of Whigsborough known as Derreens, which lies between Whigsborough Paddock and Loch Cowra. That is, roughly, in the north-west part of Whigsborough; Doorosheath is to the south-east of this townland. Derreens is not a separate townland, nor is the name recorded on the 6-inch map. I suspect that Cooke has blundered; in any case, it would be better to describe this as the Whigsborough find, and to drop the doubtful name of Dowris.

The hoard contained more than two hundred items, which were, unfortunately, dispersed among several collectors. A few specimens made their way to the Royal Irish Academy's collection. Lord Rosse obtained others, which are enumerated in Robinson's paper; and Mr. Cooke acquired a large number, of which he gives a very unsatisfactory list. He admits having given away some of the specimens to casual friends, which was, no doubt, commendably generous; but as these pieces are now lost unrecorded, his ill-judged amiability has made a statistical reconstruction of the hoard impossible.[1] What remained in his hands passed afterwards into the British Museum.[2] Mr. Armstrong has endeavoured to collect together all the available information as to the find.[3]

There were no iron objects in the collection; but the cauldrons, of which there were four, were Hallstatt in type. On the other hand, some of the objects were clearly fifth-period Bronze Age; the hoard is therefore transitional in character. As yet the Iron Age is represented only by foreshadowing influences; the hoard, on the whole, being on the bronze-age side of the dividing line.

Polybius (II 29) describes the din made by Gallic *war-trumpets* in battle: and Poseidonius (*apud* Diodorum Siculum, v 30) gives testimony to the same effect. The famous statue of the Dying Gaul shews, beside the stricken warrior, a war-trumpet exactly similar to some which formed a very con-

[1] Mr. H. S. Crawford has done his best to supply this, JRSAI liv p. 14.
[2] *British Museum Bronze Age Guide*, p. 105 ff.
[3] "Some Irish bronze-age finds," PRIA xxxvi p. 134.

spicuous element in the Whigsborough hoard. Bronze trumpets have nowhere been found so frequently as in Ireland, especially in hoards; and it is reasonable to conclude that (like the lunulæ of which the same is true) they were an Irish invention, probably of the pre-Celtic people, and that they were adopted by the Celtic immigrants and through them spread to the Continent. The prototype of these trumpets (Fig. 9 *d*) was clearly a cow's horn, which likewise served, in later times, as a model for one type of drinking vessel. The horn, when used for either purpose, was protected from splitting with a metal collar encircling the open end, and secured in position by means of rivets. These rivets remain, as otiose ornaments, on the bronze trumpets. The embouchure of the trumpet either is at the narrow end, or (more frequently) is an oval opening, adapted to the shape of the pouted lips, at the side of the tube. Care is taken to make the edge of the opening blunt and smooth, so as to avoid injuring the mouth of the trumpeter. When the opening is at the side, the narrow end is stopped; the decorative treatment of the end in such a case is suggestive of a plug with moulded ornament turned upon it. Very possibly it is the copy of an actual wooden plug which stopped the end of the cow-horn prototype: and incidentally indicates the use of some kind of turning-lathe by the carpenters that supplied the plug.

Most of the extant trumpets are moulded by the *cire perdue* process. An earthen model was made of the interior of the trumpet, and was then covered with a layer of wax. Metal pins were driven at intervals through the wax into the clay core; an outer covering of clay was spread over the wax surface and the whole was subjected to heat. This melted out the wax, and hardened the clay. The pins kept the clay core and the outer covering in their proper relative positions after the wax had flowed away. Molten bronze was then poured into the space which the wax had occupied; this took the exact form that had been given to the wax. When the bronze had cooled and hardened, the clay moulds were broken away, and the supporting pins were rubbed down flush with the surface of the metal. It is noteworthy that the supporting pins, which can be identified embedded in the metal of the trumpet, have a smaller proportion of tin in their composition than the body of the trumpet itself. This indicates a knowledge of the fact that, the larger the proportion of tin in the alloy, the lower is the temperature necessary for melting it. Had the pins been quantitatively of the same composition as the bronze of the trumpet, they would have been melted by contact with the hot molten bronze. These facts, determined first for a

series of trumpets found in Pomerania,[1] were found by Armstrong also to apply to trumpets from Ireland. It greatly increases our respect for the bronze-workers of the period, when we learn that they had acquired so much theoretical and practical knowledge.

Some trumpets are made in two sections, fitting into one another (as clarinets and other instruments are in modern times jointed for convenience of carriage).[2] A greater length of tube is thus obtained, and in consequence a deeper fundamental note.

There is another form of trumpet, less common, and probably rather later in date, which is not cast in a piece, but formed of a sheet of metal bent round a core (like the mandrill on which organ-builders model their pipes), and secured in position by means of a strip of metal running longitudinally and riveted to the two edges. There is a fine specimen in the Royal Irish Academy's collection, in which the rivets run through *from inside outward:* a masterpiece of ingenious workmanship and delicate manipulation.[3]

We may also mention here, though it is impossible to assign a date to the object with any confidence, a tapering tube of willow-wood, 6 feet 4 inches in length, bound around with a spirally twisted ribbon of bronze. This was found towards the end of the eighteenth century at Becan (Mayo), and is likewise in the Royal Irish Academy's collection.[4] It is not altogether certain that it was a trumpet, but no other satisfactory use can be assigned to it.

Trumpets have sometimes been found in groups ; in such a case they are either the stock-in-trade of a manufacturer, or else the store of some establishment, religious, military, or what not, that maintained a corps of trumpeters.[5]

Even more remarkable in the Whigsborough hoard was a number of objects of a peculiar form such as has not, as yet, been found anywhere else. These are hollow balls of bronze, completely closed, save for a longitudinal slot cut through the wall of some of them, egg-shaped, but pointed at the upper end : the upper end is surrounded with a series of ornamental grooves : and at the top there is a movable loop for suspension

[1] Hubert Schmidt, "Die Luren von Daberkow," *Prähistorische Zeitschrift* vii p. 85. For illustrations of Irish trumpets see *Dublin Penny Journal* 27 July 1833 p. 27, *Reliquary and Illustrated Archæologist* v p. 116.

[2] See a specimen illustrated PRIA xxviii p. 105.

[3] Described by Sir D. J. Norreys in JRHAAI xiv p. 277.

[4] Viscount Dillon and R. Ousley, "Description of an ancient Irish instrument," TRIA iv p. 33.

[5] Such a group is described by Mr. R. Day in JRHAAI xiii p. 422. See further, Armstrong, *op. cit.* p. 140 : Bigger in UJA II viii p. 11.

(Fig. 9 *g*). There is some object inside, said by Mr. T. L. Cooke (who seems to have opened one of them), to be a small piece of metal, which causes the instrument, when shaken, to emit a faint tinkling sound. Over fifty of these objects were found in the hoard: as well as another, globular, and without the ornamental grooves. They are too large, and they use up too much valuable bronze, to be mere children's toys; they are too carefully made, and they emit too feeble a sound, to be cattle-bells; and if they had been intended for any such utilitarian purposes we might have expected to find single specimens in various parts of the country. That this is not the case suggests that all the fifty specimens belong to one group, and are radically connected together; that, in fact, they were meant to be hung upon some kind of wooden frame in a scalar sequence, in order to make a sort of *Glockenspiel*.[1]

The remaining objects of this hoard were cauldrons, socketed hatchet-heads, three socketed gouges and fifth-period spear-heads, without apertures in the blades. If, as seems probable, this hoard was the stock-in-trade of a manufacturer, it is to be feared that he was not the most honest of dealers, as much of his bronze is extensively adulterated with lead. Thus, one of the trumpets was found to be of metal thus composed:—

Copper	79·34 per cent.
Tin	10·87 ,, ,,
Lead	9·11 ,, ,,
Impurities	·68 ,, ,,
	100·00 ,, ,,

It has been supposed that the bronze of the hoard has acquired the peculiar golden lustre which distinguishes it, and which has received the name "'Dowris' bronze" among archæologists, from the admixture of lead. Whether this is the case or not seems to be uncertain. The adulteration, it will be noticed, must have been made before the bronze was alloyed with the tin, as it is the copper, not the tin, which is deficient.

Two *gold vessels* of Hallstatt type are known to have been found in Ireland. One of these is now lost; the other is a mere fragment, now preserved in the Royal Irish Academy's collection. They both have analogies in Central and North-eastern Europe.

The lost vessel was found in the year 1692 at Devil's-bit Mountain (Tipperary), and for long was in the possession of

[1] See illustrations in *Dublin Penny Journal* 18 May 1833 p. 376: JRSAI liv p. 9. These objects have been frequently illustrated elsewhere.

the Comerford family, by whom it was regarded as an "old Irish crown". It was taken to France in the eighteenth century, and has never been heard of since; probably it has long ago met the fate of the crucible to which all ancient gold ornaments are liable.[1] Wilde suggested the possibility that the object was not a crown but a bowl; and all modern writers have adopted this interpretation. Kossinna, and following him, Armstrong, considered that it was not of native Irish workmanship, but Germanic, being analogous in type to certain objects found in the great gold hoard of Messingswerk.[2] The bottom of another vessel of gold, of unknown provenance, still remains in the Royal Irish Academy's collection.[3] This, again, is quite clearly of North Germanic type, and can hardly be considered as being a native product.

Rather more doubtful is the ascription of an ornamented gold band from Lambay Island (Dublin) to the Hallstatt period.[4] In this identification Armstrong was influenced by the analogy which its decoration shews to that of the gold and bronze belts found in the cemetery of Hallstatt.[5] But the analogy is not close, and there is some probability that the object is to be assigned to a later period. The late Dr. Bremer pointed out to me that its decoration presents some analogies to the well-known Witham shield in the British Museum, which is of La Tène date.

The objects described by Armstrong as *flesh-hooks* are very remarkable; but I doubt whether this interpretation of their use is correct. The most noteworthy of these objects was found at Dunaverney Bog, near Ballymoney (Antrim), and is now in the British Museum. It is also described as a flesh-hook in the *British Museum Guide to the Bronze Age*, where it is figured.[6] But it is more probably a steelyard.[7] It consists of

[1] See, for the only available record of the appearance of this object, the illustration in Wilde's *Catalogue of Gold Objects* p. 8, copied from Dermot O'Connor's translation of Keating's *History of Ireland* (1723). A rather different representation is given in *Dublin Penny Journal*, 25 August 1832, p. 72. The illustration in Wilde has been frequently reproduced, and has indeed become traditional; a good print of it will be found in G. Kossinna, *Der germanische Goldreichtum in der Bronzezeit* Mannusbibliothek no. 12 (1913) p. 50: Bremer (*Die Stellung Irlands* p. 10) considers that it is too uncertain to be of any scientific value.

[2] Wilde and Kossinna *opp. cit.*: Armstrong, *Gold Catalogue* p. 40.

[3] Illustrated by Armstrong, JRSAI liv p. 116. See also his *Gold Catalogue* p. 40, and references there.

[4] Armstrong, *Gold Catalogue* p. 42.

[5] Von Sacken, *Das Grabfeld von Hallstatt* (Vienna 1868), plates ix-xi.

[6] Second edn. p. 104. See also *Dublin Penny Journal* 6 April 1833 p. 324: JKAS iii pp. 64, 65. Also Fig. 11 *m*.

[7] I suggested this identification of its purpose to Mr. Armstrong, and he has quoted it and attributed it to me. I afterwards found, however, that I had been anticipated many years before, by a writer signing himself T. A., who made the same suggestion in the *Dublin Penny Journal* of 22 June 1833, p. 416.

a tube of bronze with a pivoted double hook at one end and a fixed ring at the other. The total length of the object is 1 foot 11¼ inches. Two small perforations run through the rod from side to side, about one-third of the length from each end; into either of these a needle could be inserted, upon which the rod could be balanced. When opened, the rod was found to contain what looked like fragments of a spring. Seven suspension-rings hang from the under surface of the rod, between the pivot-hole and the terminal ring. These rings are attached to pins, which run vertically through the rod, and terminate upward in figures of birds. There are first three small swan figures; then two larger swan figures, which bear a striking resemblance to the swan figures which decorate various Hallstatt objects; and then come two other birds not unlike thrushes. (See Fig. 9 *m*.)

The other specimen, found at Largy (Tyrone), is similar, but it lacks the suspension-rings and the birds.

A *harpago*, certainly Etruscan in origin, was described by a Mr. George Stephenson (UJA I iv p. 96). He bought it in the year 1845 from a travelling pedlar, who had obtained it from a woman. The woman was said to have found it in a streamlet near Saintfield (Down). The history of this object is thus ill-authenticated: Mr. Armstrong, after investigating the available evidence, could not satisfy himself that it was genuinely an *ancient* importation into the country. In any case it is a "wanderer," like others which will be noted on a later page. It is now in the Royal Irish Academy's collection.

The two *shields* enumerated in Armstrong's list are those from Clonbrin and Annandale which, in this volume, we treat as of the Bronze Age: they are described in the preceding chapter.

A couple of *bracelets* in bronze (Fig. 11 *c*), from Antrim, with the characteristic Hallstatt division of the bar of metal into a row of knobs, resembling, and probably suggested by, a string of beads,[1] completes the record of Hallstatt finds made in Ireland down to the time when Armstrong wrote his paper. Since then another bracelet from the Knowles collection has come to light, and is described by Bremer. It was found in a bog, somewhere near Castledawson (Derry). It is penannular, in the shape of a broad strip of metal, oval in cross-section, and thus concave to the arm. The outer surface has been ornamented with a simple linear pattern, engraved and punched after casting. The type, as Dr. Bremer duly notes, is well known in Central Europe, whence it must have been imported.

[1] E. C. R. Armstrong, "A bronze bracelet of Hallstatt type said to have been found near the town of Antrim," JRSAI xli p. 58.

It is, again, a mere "wanderer," and cannot be taken as proving the existence of a Hallstatt settlement in Ireland.[1]

THE LA TÈNE PERIOD

Not only is Hallstatt culture not indigenous to Ireland; the first phase of La Tène culture is also absent, indeed, is yet more completely absent than its predecessor. The peculiar forms of sword-hilts and fibula, the chariot-burials, and the other special characteristics of this period are totally unknown in Ireland.[2]

Objects displaying the characteristic decorative art of the La Tène period exist in Ireland, both in stone and in metal. They are remarkably few in number: but they display an exceptionally high order of excellence. From the historical point of view the objects in stone are the more important. It would be *possible* to hold the theory that portable metal objects had been made abroad, and imported into the country. This view is sometimes expressed in such a way as to betray a mere prejudice—subconsciously present in the minds of scholars who describe La Tène objects of Irish provenance—that Ireland can never have produced native artificers capable of such works of art. This assumption cannot be maintained in the presence of large carved masses of stone, weighing several tons. A monument of this kind must necessarily have received its decoration in or near the place where it was found.

On the lawn in front of Turoe House, near Lochrea (Galway), there stands a block of granite, oval in horizontal section, with rounded top. It was carried to its present situation early in the nineteenth century from a small and insignificant earthen "fort" in the neighbourhood called "Feerwore".[3] A little below the middle of the stone a horizontal band of simple "Wall-of-Troy" pattern encircles it; above this belt the whole surface of the stone is sculptured with an intricate pattern of foliage and geometrical devices; it is, indeed, an excellent example of La Tène art. The studied lack of mechanical symmetry, while maintaining a well-proportioned balance—one

[1] W. Bremer, "A Continental bracelet of the Hallstatt period found in Ireland," JRSAI lvi p. 58.

[2] The chariot-burial (if such it be), found at Navan in 1848 is of much later date: see E. C. R. Armstrong, "Some Irish antiquities of unknown use," *The Antiquaries' Journal* ii (1922) p. 6. Coffey in PRIA xxiv p. 261, speaks of swords from Lisnacrochera as being of La Tène I; but these swords, with their bell-shaped guards, are certainly of L. T. II. Compare also the Ballinderry sword, JRSAI liii plate facing p. 19 no. 2. Dr. Bremer considered that the Turoe and similar carved stones belong to this first period: my own inclination would be to put them, on the whole, rather later.

[3] There is a plan of this earthwork, with an indication of the original position of the stone, in JGAHS ix p. 190.

of the chief charms of La Tène work—is well and ingeniously carried out in this monument: it affords unimpeachable evidence of the presence in Ireland of at least one first-rate La Tène artist at some time previous to the first century B.C.[1]

At Castle Strange (Roscommon) there is a similar stone. It is smaller than that of Turoe House, and its decoration, though of the same type, is of inferior merit. In this case the patterns are merely outlined; there is no cut-down background, as on the other stone.[2]

At Killycluggan (Cavan) there is a third stone of the same series. This has, unfortunately, been reduced by vandalism to the plain base, with the bottom of the ornamentation remaining along the fractured edge. When complete the stone was probably similar in form to that of Turoe House; the remaining portion of the ornamentation includes some well-made spirals.[3]

These three monuments, with their highly developed technique of design, cannot possibly have stood alone.[4] There must have been many others of the same kind—it may be, indifferent or bad in artistry as well as good. Probably early Christian iconoclasm may account for their almost total disappearance. Unlike the rude pillars of the earlier and half-forgotten Bronze Age, they were monuments in a style of art definitely associated with the paganism that was still fresh in memory—was still, indeed, a living, if a vanishing force. Most of what people have written about relics of phallicism in Europe is as much undiluted nonsense as the prophetic metrology of the Great Pyramid: but it is undeniable that the general appearance of the Turoe House stone is phallic in suggestion, and would *ipso facto* arouse the hostility of the worshipper of a purer Faith. Moreover, these La Tène monuments were, at the time, comparatively new, and so did not possess the mystery of antiquity which invested the bronze-age monuments with the superstitious awe attaching to the unknown.

A remarkable story quoted by O'Curry[5] is here in point.

[1] See G. Coffey, "Some monuments of the La Tène period recently discovered in Ireland," PRIA xxiv p. 257. See also JRSAI liii plate facing p. 30.

[2] Coffey, *op. cit.*: "The carved boulder at Castle Strange," JRSAI xxxvii p. 346; also the same plate as mentioned in the preceding note.

[3] R. A. S. Macalister, "On a stone with La Tène decorations recently discovered in Co. Cavan," JRSAI lii (1922) p. 113.

[4] A fragment now in the Royal Irish Academy's collection from Mullachmast, (Kildare), is described by Coffey, *op. cit.*, as belonging to this series; but it is more probably of an early Christian date. It is certainly enigmatical: its original shape, when unbroken, is as difficult to determine as the exact place to which its carved ornament belongs.

[5] *Manners and Customs of the Ancient Irish* ii 329. The importance of the story was first pointed out by Sir W. Ridgeway, in his notable paper on "The date of the first shaping of the Cuchulainn Saga," *Proceedings* British Academy vol. ii.

It is to be found in the MS. H 3 17 in Trinity College (Dublin) Library, and is to the effect that the Ultonians had a law that their warriors should each have silver shields made for them, and that the chased decoration of each shield should be different from those of all the rest. There is some mistake here about the *material* of the shields; for the day for the use of silver in Ireland was not yet. It is, however, quite in accordance with what we know from other sources, that each warrior should have a different device upon his shield.[1] Cu-Chulaind, hearing of this edict, ordered a shield with a peculiar device for himself; but the armourer confessed that he had already exhausted his powers of invention upon the patterns of the shields of the other Ultonian braves, so that he was unable to invent a new pattern. Cu-Chulaind threatened to kill the unfortunate artist—in spite of his being under the protection of the Ultonian king, Conchobar—unless he should succeed in carrying out the order. While the artist was sitting disconsolate in his hut, a stranger made his appearance, and asked the cause of his trouble. "Good cause have I," answered the armourer, "for I am to be slain unless I can make a shield for Cu-Chulaind." "Clear the floor of thy workshop," said the stranger, "and let it be sprinkled with ash, to the depth of a man's foot." This was done. Then the stranger produced a "fork" the name of which was *luath-rindi*, "ash-graver". One prong of the fork he placed in the ash, and with the other he described the device to be graven on the shield. Then he departed, and the armourer saw him no more; but he had left behind the device which the armourer, unaided, had been unable to invent.

The story belongs to an extensive group of folk-tales which profess to account for the existence of works of art that seem to transcend mere human capabilities. It may well have been told originally of some remarkable shield which was supposed to have belonged to Cu-Chulaind: such a shield as the splendid example from Battersea in the British Museum. Giraldus Cambrensis records an analogous tradition of the origin of the now lost *Gospels of Kildare*, to which we shall return in a later chapter. Saint-Marc Girardin tells us the picturesque tale of how a demon gave to the architect of Cologne Cathedral the design for that mighty building, in exchange for the artist's soul; and how, when outwitted—as usually happens in such stories—he vented his wrath by pronouncing the doom that the artist's name should remain for ever unknown. (This, after all, was quite reasonable, for as the architect had failed to pay the stipulated price, the credit for the design belonged,

[1] Compare Diodorus Siculus, *Bibliotheca* v 30.

in all equity and justice, not to him, but to the demon.) The Pagan tale is more generous than the Christian: the benevolent stranger claimed no guerdon; and he suffered the name of the armourer, Mac Enge, for what it may be worth, to live on in the memory of men.

But interesting though the folk-lore aspect of the tale may be, its essential importance lies elsewhere. It affords us a most welcome glimpse into a La Tène artist's studio. O'Curry has woefully misunderstood the significance of the ashes. Before the invention of cheap paper, and the discovery of the properties of india-rubber, a bed of fine sand or of ash would be the most economical tablet for the use of a designer, a geometrician, or any other whose work involved the making and effacing of trial lines, figures, and sketches. Our designer drew out his patterns with a "fork"—that is to say, a pair of compasses. It is well known as one of the most remarkable features of La Tène designs that free use is made in them of circular curves, drawn in this mechanical way.

Ash was not the only material used for this purpose. In both the Pagan and the Christian sections of the Celtic period in Ireland, bones were much used for artistic experiments, and the Royal Irish Academy's collection preserves some remarkable specimens. It was noted in the last chapter that at some time in the course of the La Tène period a company of artificers established themselves in the great series of bronze-age carns which form the cemetery of Lochcrew, and which must have by then been already emptied of their bronze-age contents. There they spent their time in tracing patterns upon slips of bone. Many such slips were found in the carns; some were ornamented with compass-drawn curves in various combinations, while others were blank. (A specimen is shown, Fig. 9 *h*.) Undoubtedly these devices were the raw materials for designs intended to be worked up into brooches or other ornaments.[1] With these bone slips we may compare a series of "neatly polished rectangular laminæ of ivory, or at least resembling ivory"—the alternative is a well-advised piece of caution—found in levelling a fort at Ballymooney near Mullinavat (Kilkenny). These objects were not inscribed, though some of them had round holes in the middle; some were oblong, about 1 inch by 2, and some square.[2]

The designs which the armourer was expected to produce were evidently not the infinite variety of birds and beasts, or

[1] Conwell, *Tomb of Ollamh Fodhla*, p. 54 ff. See also H. S. Crawford, "The engraved bone objects found at Lough Crew," JRSAI lv p. 15, with a full bibliography.

[2] JKAS i pp. 385-6.

parts thereof, which went to make up the heraldry of the Middle Ages. They were abstract patterns, composed of a limited number of art motives. A designer of small capacity would quickly come to the end of his powers of invention and combination; the difficulties of the unhappy Mac Enge were no doubt very real, and assuredly confronted more than one of the less expert journeymen of his day. In the light of the story of the designing of Cu-Chulaind's shield we may now proceed to describe the surviving examples of La Tène metal work, with the greater confidence that we are dealing, at least in most cases, with genuinely native products.

At first sight it is surprising that so few remains of La Tène goldsmiths' work are left in the country; especially if we consider the richness of bronze-age Ireland in gold, and the extravagant wealth mirrored in the descriptions of dress and equipments in the contemporary and slightly later literature. To explain this seeming anomaly we must recall that the bronze-age gold which we possess had all been, so to speak, withdrawn from circulation before the Iron Age began—either by being buried in tomb-deposits or other forgotten hoards, or else by being lost in bog-holes. The gold ornaments of the Iron Age remained above ground. The Law of the Twelve Tables prohibited the burial of gold in tombs; perhaps the same sensible regulation was in force in Ireland—certainly no La Tène tomb with gold deposits has, as yet, been found in the country. Gold was therefore passed from hand to hand; it was melted and re-melted as fashions changed, and as family necessities arose. Much of it passed, in time, into the possession of the monasteries, by the gift of devotees or of penitents—and as the gold in the alluvia of the Wicklow rivers was by now becoming exhausted, there was no more to take its place. The gold in the monasteries became the prey of Scandinavian pirates; what was left after they had filled their pouches remained for the benefit of King Henry VIII of sainted memory, and of his creatures.

In this connexion it is important to notice that a number of metal-smelters' crucibles of clay have been found in the iron-age lake-dwellings or crannogs, described later in this chapter. Analysis has shewn that, in every case examined, the metal for which they were used was copper, not gold.[1]

The only really important find of La Tène gold that has been made in the country is the great hoard discovered toward the close of the nineteenth century at Broighter, near Limavady

[1] R. J. Moss, "A chemical examination of the crucibles in the collection of Irish Antiquities of the Royal Irish Academy," PRIA xxxvii p. 175.

(Derry). The collection is now to be seen in the Royal Irish Academy's collection, and consists of the following pieces :—

A model of a boat with its fittings.
A bowl.
Two torques.
Two chains of fine plaited gold wire.
A collar.

Some suppose that the hoard was a votive deposit—perhaps, as the golden boat would suggest, a gift to some sea-god in gratitude for deliverance from shipwreck. Others suppose that it was the forgotten *cache* of a thief. The heterogeneous nature of the deposit would favour either hypothesis equally well; but it is really impossible to form any definite conclusion as to the original circumstances of the hoard. Owing to the anomaly of the mediæval law of Treasure Trove, it was upon this indeterminate point of unrecorded history that the question of the custody of the relics in modern times was made to depend. Into these irrelevancies this is not the place to enter. All's well that ends well; these national treasures are obviously in their proper place in the National Museum.[1]

The boat is 7½ inches long by 3 inches broad, and weighs 3 oz. 5 dwt. It is made of a single sheet of gold plate, which has been slit and re-joined at bow and stern. The gold is much alloyed with silver. There were originally nine thwarts or rowers' benches, of which the first (counting from the bow of the boat) is now missing. These are riveted to the sides of the boat, a little less than half way down from the gunwale to the keel. The central bench is rather wider than the others, and is perforated in the middle with a hole through which to step a mast. The benches were provided for the rowers of two oars, for there is a rowlock at each end of each thwart, represented by a small loop of gold wire passed through a pinhole in the gunwale. In a full-sized boat of the proportions of this model it would be possible for four, perhaps six, rowers to sit upon each of the benches. On the starboard side of the stern, which, like the bow, is pointed, there is a similar loop, evidently provided for the steering oar.

The fittings of the boat, which are separate pieces, weigh collectively 6 dwt., and consist of the following pieces :—

(*a*) Fifteen out of the eighteen Oars.
(*b*) The Steering-oar, distinguished from the rowing oars by its short handle and its large broad blade.

[1] A sufficient abstract of the legal proceedings regarding the custody of the hoard is contributed by R. Ll. Praeger to PBNHPS 1903-04 p. 50. See also Armstrong, *Gold Catalogue* p. 20 ff.

(*c*) The Mast, now by some accident bent into a hook; it was at first explained as a boat-hook.

(*d*) The Yard of the mast, broadened in the middle and perforated to allow it to slip on to the mast.

(*e*) Three Booms, forked at one end to play on the mast.

(*f*) A Punting-pole.

(*g*) A Grappling-iron, or Anchor, with a long stem and four flukes.

Apart from the artistic interest of the collection, it has no small value as being a representation of a large boat of the period, with its furniture. It is a model of a sea-going vessel, possibly the kind of ship in which St Patrick made his memorable flight from servitude: though that vessel was no doubt provided with a deck, a hold for cargo, sleeping-compartments, etc., which we are left to imagine when we contemplate the model. Probably the ropes and sails were represented by threads and pieces of linen, which naturally have disappeared. To judge from the spars, the boat seems to have carried something more than the simple lug-sail which we find in the modern *curach;* so little is known about early rigging in Northern Europe that it would be rash to try to restore the sails of this craft. It may have carried sails resembling a modern mainsail and a topsail, possibly also a jib and a spinnaker.

The torques, one of which is broken, are bars of pure gold, around which a spiral has been engraved. In the groove a wire of gold is inlaid. The technique of manufacture is thus entirely different from that followed in the making of torques in the Bronze Age. The weight of the perfect specimen is 3 oz. 7 dwt. 9 grs.

The chains are complex plaits of gold wire, of the kind known as "Trichinopoly work". They are of a gold of different colour from that of which the bowl and the boat are made, and their workmanship belongs to a different school of art. Chains of this kind have been found in Alexandria, in surroundings and associations which date them to the first century, B.C.—an approximate date, which is corroborated by the collar still to be described. Though the chains are almost certainly importations, the technique which they display was afterwards imitated with success in Ireland: a fragment of Trichinopoly work in bronze wire is attached to the so-called "Tara Brooch". They are provided at the ends with catches, in the form of hinges with sliding rivets, whereby they can be secured.

The bowl is a hemispherical vessel beaten out of a plate of the same kind of gold as the boat: it weighs 4 dwt. 12 grs. There are four double perforations at equal distances around its circumference, each pair with a small ring of wire looped

into it, from which, in two cases, a larger ring is dependent. The object might have been the scale of a balance, though it would be unusual, to say the least, to make such an object of gold.

The collar is a hollow tube of gold, $1\frac{7}{8}$ inch in diameter. Some baser material was probably inserted into the hollow to serve as a backing, thus stiffening the tube and preventing it from becoming indented. This, however, has disappeared. The collar is made in two halves, each half ending at one termination in an expanding disc. From the disc in the one half there projects a T-shaped bar, resembling a miniature stopcock; in the other disc there is a slot into which the head of the T fits, and locks when the collar is on the neck of the wearer. The ends of the collar opposite the locking discs are now mutilated, so that it is impossible to say how they were finished and secured; it may well be that the ornament was torn with violence from the neck of the man who wore it last. There may have been a sliding cylindrical band; though the *repoussé* ornament, which is carried to the edge of the fracture, does not seem consonant with this. To remove the collar, one half would have to be turned through a quarter-circle, so as to release the fastening.

The ornamentation of the two halves of the collar is identical; it is *repoussé*, and was presumably beaten out over a mould of bone or of bronze. It is founded upon the interlocking of two S-curves, enriched with devices half-floral, half-geometrical. The compass has been used in designing the ornament, especially in the hatching of the background, which latter is in a form unique among La Tène ornaments. On the whole, this is the finest ornament in gold that the entire La Tène period of Europe has bequeathed to us: that it is of native Irish work there is no valid reason to doubt.[1]

The only other gold object of importance of La Tène date, recorded from Ireland, is a collar found at Clonmacnois. It is a hollow tube of gold bent into a ring; one end terminates in a double-conical expansion covered with punch-marks and with characteristic La Tène ornament in relief. The other end of the tube fits into a socket at the free end of the expansion, where it can be secured with a movable pin. The joint of the collar, when closed, thus presents an appearance as of two

[1] See (Sir) Arthur Evans, "On a votive deposit of gold objects found in the north-west of Ireland," *Archæologia* lv part ii p. 391. R. Cochrane, "On Broighter, Limavady, Co. Londonderry, and on the find of gold ornaments there in 1896," JRSAI xxxii p. 211 (a suggestion made by another writer in the same volume, p. 266, that the ornaments formed part of a Church treasure, is inadmissible in view of the date of the collar and the chains). See also Armstrong, *Gold Catalogue* p. 26: and *L'Anthropologie* x p. 183 for two pottery models of boats from Drenthe.

conical terminals, one at each end of the ring, pressed base to base. Diametrically opposite to this there is an expansion, the ornament of which was perhaps suggested by a well-known type of glass bead.[1]

This form of fastening, which consists essentially in thrusting one end of the loop into the hollow end of the other, is foreign to the Bronze Age: and it helps us to date an otherwise enigmatical bronze bracelet which has been described and figured by Frazer,[2] though he should not have used the misleading expression "of torque pattern" in the title of his paper. The greater part of the loop is of uniform thickness, and is decorated with three rows of small hemispherical knobs. One end is drawn out into a thin prolongation, slightly bent sideways at the end; this is thrust into a hollow in the other end, and the side bend hooks into a perforation drilled through the wall of the hollow.

Another bracelet of this kind, from Co. Louth, is figured with a description by Rev. G. H. Reade,[3] who describes it as "copper". It is more probably bronze: it seems to have been found in association with some plain bronze rings and portions of a bronze sword, but as Mr. Reade was not present at the discovery, the evidence for this association rests only on the testimony of those through whose hands the objects passed before he acquired them. The body of the bracelet is apparently engraved with a torque-like twist, recalling the similar engraving on the Broighter torques. The tail end, which was thrust into the socket at what we may call the head end,[4] seems to have had a rivet-hole, now broken across, corresponding to a hole running through the top and bottom of the socket, for additional security.

The decoration of pellets upon the Galway bracelet described by Frazer, is not in accord with bronze-age traditions; but it reappears on a gold collar found in Co. Waterford, and published in JKAS iv p. 254. This is a loop with open ends, bent into hooks; the side of the loop opposite the opening is hammered flat for some length, and the flat surface is decorated with two rows of pellets. Similar pellet decoration is shewn on a finger-ring and on a ribbon of gold, the one from Co. Cork and the other from Co. Limerick, figured in the same volume, at pages 320 and 361 respectively.

[1] See Armstrong, *Gold Catalogue* p. 65: also JRSAI liii p. 14.

[2] W. Frazer, "On an ancient bronze bracelet of torque pattern obtained in Co. Galway," PRIA xvi p. 114. A broken bracelet, with a similar fastening, from Co. Cork, is illustrated in JRHAAI xv p. 639.

[3] JKAS vii p. 96.

[4] Without endorsing Mr. Reade's curious idea that the bracelet represents the device of "a serpent eating its tail!"

Swords.—The La Tène sword had a long and straight blade, with sharp edges for cutting, but with a blunt point not adapted for thrusting—unlike the leaf-shaped bronze-age swords, which could be used as rapiers on occasion. (No examples of the one-edged Germanic swords have been found in Ireland.[1]) The best Irish examples of La Tène swords come from Lisnacrochera (Antrim). The important and unique lake-dwelling here was unfortunately not scientifically excavated, but was treated as a private source of supply by a certain local collector, of whom it was said, among the virtues recorded of him in an obituary notice, that he " made it a rule never to leave his house without carrying back something to enrich his collection ! " " I paid little attention to this crannog," writes Mr. Knowles, " during the lifetime of [the collector in question] except when he took me there himself ; as he called it ' his crannog,' and was very jealous of anyone interfering with it." After these jealousies had been dissolved by death, Mr. Knowles felt himself free to purchase a fragment of a harp—the top beam of the frame, with perforations for thirteen strings.[2] Sickles of iron and richly decorated objects of bronze and some fragments of gold were found. One of the most curious objects was the head of a scabbard of bronze, with two little figures of birds mounted upon it. It recalls the steelyard already described, which is similarly decorated. There are some unsatisfying articles by Wakeman on this site, which have been abstracted by Wood-Martin.[3] No information is available regarding the stratification of the site, though this must have been important, as the recorded remains belong to very different periods. The swords found here were contained in scabbards, which were decorated with engraved scroll-work of a characteristically La Tène form. Part of the finds have made their way to the British Museum, and part to the Museum in Belfast.[4]

A sword with a hilt of anthropoid form was dredged up in the harbour of Ballyshannon (Donegal). The blade, which was embedded in a mass of marine deposit, is about 15 inches in length. The hilt has a well-marked human head, and short projections, counterfeiting the limbs. This type of sword-handle is well known in France : its British provenance

[1] Unless it be an example figured in JRSAI liii plate i Fig. 7 (facing p. 19) : there is no reference to it in the accompanying text.

[2] JRSAI xxvii p. 114.

[3] JRHAAI xvi p. 375, xix p. 96 : JRSAI xxi pp. 542, 673 : Wood-Martin, *Lake-Dwellings of Ireland ;* numerous references in index, especially pp. 173 ff. See also a communication by Canon Greenwell, *Proc. Soc. Antiqu. Lond.*, Series II vol. iv p. 256.

[4] The scabbards are illustrated in Wood-Martin, *loc. cit.*, JRSAI liii pp. 5, 7 : *British Museum Iron Age Guide*, 2nd ed. p. 160.

is not so certain.[1] The Ballyshannon specimen can hardly be native to Ireland; probably it was lost by some wandering Gaul. It is now in the National Museum.[2]

Spears and Javelins.—There is a La Tène spear-head of iron, enriched with inlaid threads of gold, now preserved in the museum of the Royal Irish Academy (Fig. 9 *n*). This unique object, which was unearthed near Limerick, was discovered doing duty as a poker in a country cottage! Mention should also be made of a spear-head from Corofin (Clare), which has a decorative bronze inlay deftly inserted into an opening on each side of the blade.[3] Bronze spear-heads with La Tène decoration are also known; there is one on record from Boho (Fermanach).[4]

Spear-butts.—A few bronze ferules, for the lower ends of spear-shafts, are on record. Each is in the form of a strip of bronze bent round into a gently tapering cone, about 1 foot 5 inches in length. The upper diameter of the cone is about ¾ inch, the lower diameter about ¼ inch; there is, in addition, a ring round the top end, which brings the total diameter there up to about an inch (Fig. 9 *i*). On the side is a slight engraving of La Tène ornament.[5] There is another form of spear-butt, which resembles a modern door-handle in outline; this may be about 3 inches in length, though it is often less. Examples of this type are also found in the country[6] (Fig 9 *k*).

A conical ferule, with a square tang, for the butt-end of a spear-shaft, was found near Tara Hill: it is made of bronze, but otherwise is identical in appearance with (iron) end-pieces of the same kind found at La Tène itself.[7] Beside the swords and sword scabbards, Lisnacrochera yielded ornamental bronze bands, which apparently had decorated spear-shafts.

Horse-trappings.—Horse-bits and cheek-pieces, with simple La Tène decoration upon them, are among the commonest objects of the period to be found in Ireland. They are invariably of bronze, and the ornament upon them, though characteristic, is of the slightest.[8] One of the most frequent objects

[1] A specimen said to be from Yorkshire is figured in the British Museum, *Guide to the Iron Age* 2nd ed. p. 59: but some uncertainty as to its origin is implied in the accompanying text.

[2] See JRSAI lvi p. 137, where it is described and figured.

[3] This and a few other iron-socketed spear-heads are figured in PRIA xxviii p. 102.

[4] Figured PRIA xxiv p. 263.

[5] See illustrations in JRSAI liii p. 21. See also Wilde, *Catalogue* p. 504.

[6] See JRSAI liii p. 20.

[7] A. G. More, "On an ancient bronze implement found near the Hill of Tara," PRIA xv p. 25. Compare P. Vouga, *La Tène* (Leipzig 1923) plate xiv Figs. 15-20.

[8] Illustrations will be found in JKAS iv pp. 195, 423: JRSAI liii plate facing p. 24, here reproduced as Plate II.



LA TÈNE HORSE-TRAPPINGS

of this kind is a cheek-piece, in the shape of a capital letter Y, but with the angle rounded. A pivot hole runs from side to side through the ends of the branching members, and the stem ends with an ornamental knob (Plate II Nos. 1-4. The remaining objects in this figure are horse-bits). This seems to have been placed over the neck of the horse, the knob uppermost, and secured to the ends of the bit, thus keeping the latter in place.[1]

Brooches.—The ordinary La Tène brooch, with the bow continued beyond the catch and then turned back to touch the outside of the curve, is rare in Ireland.[2] In fact, considering the importance of the fibula in La Tène art generally, the infrequency with which fibulæ are found in La Tène sites in Ireland is very remarkable. On the other hand, the few that have been found are notably decorative, and display peculiarities which it would be difficult to match in the La Tène art of other regions. A peculiarly Irish form is the *delg nduillech* of early Irish literature, *i.e.* the "leaf-brooch," in which the fibula is of the ordinary safety-pin construction, but the back of the bow is flattened and worked into a realistic likeness of a long, willow-like leaf.[3]

Ardacullen (Roscommon) is the site of a lake-dwelling where, among other objects, a very remarkable brooch was found now in the Royal Irish Academy's collection: indeed, so remarkable is it, that were it not that the evidence for its authenticity is fairly good, it might well be regarded as an ingenious forgery. It is of bronze; and the ornamental back consists of a rectangular plate of metal, bent up into a semi-cylinder in the middle. The flat parts, at each side of the cylinder, have a simple but beautiful pattern in relief upon them, clearly of La Tène type. The curve of the cylinder, however, is decorated with a granulated ornament, in shape a simple interlacing plait, much more closely akin to the art of the Christian period. In any case, the object must be of late date, the La Tène pattern being of the nature of a revival rather than a survival.[4]

Another very beautiful brooch, of unknown provenance, is in the same collection. Here the back is triangular, and is made into an open-work pattern, the members of which are the characteristic leaf-shapes that form the chief motives of

[1] Sir C. H. Read, "On a bronze object of the Late Celtic period recently added to the British Museum," *Archæologia* lxvi p. 349: *British Museum Iron Age Guide*, 2nd ed. p. 162.

[2] An ornate example from Clocher (Tyrone) is illustrated in the *British Museum Iron Age Guide*, 2nd ed. p. 160.

[3] Wilde, *Catalogue* p. 568: Ridgeway, *Date of the Cuchulain saga* p. 24.

[4] For an illustration (which has often been reproduced) see Wilde, *Catalogue* p. 569.

La Tène decoration. This brooch again is a testimony to the artistic attainments of the La Tène artificers of Ireland.[1]

Discs.—We may thus describe a class of objects which, so far as is yet known, are peculiar to Ireland. A circular disc of bronze, about 8 or 10 inches in diameter, has a circular saucer-shaped depression, not in the centre, but to one side. The rest of the surface of the disc is decorated with La Tène floral ornament, *repoussé* (Fig. 9 *l*). The use of these objects is unknown. There is sometimes, though not always, a small hole in the middle of the depression.[2]

These discs, as well as certain of the other objects which we are mentioning in this summary account of La Tène relics, shew that so far from Ireland being a comparatively unimportant La Tène region, obliged to seek for her ornaments in Gaul or elsewhere, she was in reality a land of exceptional interest, and in the practice of the art of the time displayed both ingenuity and originality. The history of the La Tène period is as yet little known and studied in the country ; it deserves much fuller attention than it has hitherto obtained.

Castanets.—These are oval, spoon-shaped objects of bronze, one end of the oval being flat for grasping between the fingers, the other end being concave-convex (Fig. 9 *j*). The flat end is decorated with simple ornament of La Tène type, engraved upon the surface. These objects are usually found in pairs ; one of the pairs is generally perforated.[3] The explanation of these objects, hitherto called " spoons," as castanets is due to Dr. Bremer ; he gave it to me in conversation, but his death prevented his putting it upon record.

Armlets.—Heavy coiled armlets of bronze, with rather coarse ornament in relief upon them, are recognized as a Scottish type of ornament. One specimen has been found at Newry.

Helmet-spikes (?)—Two hollow conical spikes of bronze, tastefully decorated with La Tène curves and studs of red enamel, are in the Royal Irish Academy's collection. They are enthusiastically described by Kemble,[4] who says, " for beauty of design and beauty of execution this may challenge comparison with any specimen of cast bronze-work that it has

[1] Wilde, *Catalogue* p. 567. See also JRSAI liii p. 13, where some other brooches of similar type are figured.

[2] For illustrations see Wilde, *Catalogue* p. 637 : JRSAI liii, plate facing p. 1 : *British Museum Iron Age Guide*, 2nd ed. p. 161.

[3] See A. Way, " Notices of certain bronze relics, of a peculiar type, assigned to the Late Celtic period," *Archæological Journal* vol. xxvi p. 52. A paper by Very Rev. Canon Rock on " Celtic spoons," *ibid.* p. 35, may be neglected. See also Armstrong in JRSAI liii p. 26, and references there ; Evans, *Bronze Implements* p. 406, with further references. For an illustration of a pair (not Irish) see *British Museum Iron Age Guide*, 2nd ed. p. 149.

[4] *Horæ Ferales* p. 79.

ever been my fortune to see". It is not possible to say with certainty to what class of object these ornaments belonged. An ingenious but fantastic restoration as a spiked crown has been suggested.[1] There are three similar but larger spikes, more simply decorated, in the museum of University College, Cork.[2]

Enamel was but little used in the decoration of La Tène objects in Ireland, and the few examples known are unimportant. This is curious, for a large lump of red enamel, evidently part of a metal-worker's equipment, is in the Royal Irish Academy's collection. It is said (doubtfully) to have been found at or near Tara Hill. Evidently it was intended to be cut up into buttons, to be secured by means of pins to the surface to be decorated; this technique belongs to early in the La Tène period—possibly L.T. I., and certainly not later than L.T. II.[3]

Glass and Glass Beads

Glass is used from the La Tène period, and even from the Bronze Age in Ireland, as a material for beads, of which large numbers have been found, especially in the shore sites. But unfortunately not a single find of iron-age beads seems to have been scientifically recorded; all the known examples have been purchased by collectors from itinerant pedlars.[4]

Beads were in use in the Bronze Age, and certain greenish glass beads, not perforated, and shaped like two small spheres pressed together (the so-called "dumb-bell bead"), have been assigned to that period. Some of these were found in the Lochcrew carns. As for the later beads, all the known examples being detached from their archæological contexts and from each other, they have to be considered on their own merits. A fine series is illustrated in a paper by Mr. Knowles, which incidentally exposes the irreparable injury to science, and to the prestige of scientific archæology, by the squalid rivalries of collectors.[5] He indicates a scheme of classification by

[1] In *Archæologia* xlvii part ii p. 473, where the objects are very fully described and illustrated.

[2] Illustrated PRIA xxviii p. 104: JRSAI liii plate facing p. 22: M. Murphy, "On a Late Celtic head ornament found at Cork," *Journal Ivernian Society* vol. iii p. 110.

[3] See V. Ball and M. Stokes, "Block of red glass enamel said to have been found at Tara Hill," TRIA xxx p. 277: E. C. R. Armstrong, "Note on the block of red enamel from Tara," JRSAI xli p. 61. See further the same writer's observations in JRSAI liii p. 16.

[4] Except two fragments of green glass beads found in an iron-age burial-mound at Grannach (Galway): PRIA xxxiii p. 509.

[5] W. J. Knowles, "Ancient Irish beads and amulets," JRHAAI xv p. 522. See further, R. Day, "On some ancient personal ornaments of glass found in Ireland," JRHAAI x p. 335: Rev. L. Hassé, "Statistics of ornamented glass beads in Irish collections," JRSAI xxi p. 359: Wilde, *Catalogue* pp. 163-5.

(1) material, (2) shape, and (3) ornament. But as we have already said of other groups of objects, classification for its own sake is a useless waste of time. It is only of value when facts of chronology, history, or ethnology can be deduced from it. Most likely the more highly decorated glass beads, with polychrome ornamentation, are not of Irish origin at all; but a study of these objects in comparison with similar finds from other parts of Europe would take a volume to itself, which would have to be illustrated with complicated and expensive coloured plates. We must wait until more properly authenticated finds of Irish beads are made;[1] with these as a basis, a study of the whole subject can be begun.[2] Certain beads found at Dunworley (Cork), seem to be comparatively recent Oriental importations.[3]

Meanwhile we may content ourselves with noting that beads in stone and in glass are found which may reasonably be assigned to the Iron Age; some at least seem to come as late as the Viking period, as appears from evidence presented by Mr. Armstrong.[4] Those in amber, jet, and certain beads and conical pendants in limestone we may assign to the Bronze Age,[5] along with the dumb-bell glass beads. Usually the stone beads are made of material which will take a high decorative polish; they are either regular spheres or circular discs, or else are irregular pebbles, not shaped to any definite form. Mr. Knowles remarks that in the last-mentioned form the perforation is usually of the sectional shape of a dice-box, as it has been drilled from both sides of the pebble. The glass beads, which are in various colours, are usually flat discs or spheroids in shape, and are decorated in various ways. In some, heavy rope-like ridges of glass run over the surface, either straight or else twisted into various devices. These ropes often differ in colour from the body of the bead, and, when there are several ropes on one bead, they often differ in colour among themselves as well. Other beads are decorated with knobs of varied colour, emphasizing the more prominent parts of the spheroid. In others, again, the bead is itself an intricate twist of strands of glass of different colours. It is hardly too much to say that

[1] It is not clear what we are to make of a "glass-factory" at Melitia (Wicklow), described by Rev. J. F. M. ffrench (JRHAAI xvii p. 420). Whatever it may be, it appears to be of rather later date than the period with which we are at present concerned.

[2] Mr. Alexander Nesbitt contributes a creditable attempt at discussing the date of these objects to JRHAAI xv p. 592. See also a note by Mr. G. M. Atkinson, JRHAAI xvi p. 69.

[3] JKAS v p. 59: *Proceedings Soc. Antiqu. Lond.* Series II vol. ii p. 47.

[4] "Two Irish finds of glass beads of the Viking period," *Man* xxi No. 40.

[5] See examples in Wilde, *Catalogue* p. 95: PRIA vol. xxix plate xxiv.

there are scarcely two absolutely alike: only these broad outlines of description can be attempted here.[1]

Pottery

The pottery of the La Tène period in Ireland, so far as we know, differs little from the rude pottery of the preceding Bronze Age. As yet nothing comparable with the superior pottery from the cemetery of Aylesford in Kent, described by Sir Arthur Evans,[2] has come to light. The *total* absence of pottery from the soil excavated on the Hill of Uisneach is a most remarkable fact, in view of the evidence which the site afforded of extensive feasts.[3] It appears that wooden dishes and drinking-vessels, such as were still in use in the nineteenth century, were the chief utensils employed. On the other hand, pottery is a regular "yield" of crannog or lake-dwelling excavations; and though the vessels are usually broken and nothing but fragmentary shreds comes to light, it is possible to restore some of them, and to learn, first, that there are two different types of ware, the one coarse and the other rather finer; secondly, that both types of ware are totally different from the wares of the Bronze Age, both in texture and in ornament; and thirdly, that there is a considerable variety of shapes of vessels, though most of them are one-handled jugs with a narrow neck, or else two-handled pots with a wide mouth and a flat bottom. The differentiation of the two classes of ware was first noticed by Dr. Bremer, though he did not live to publish it. The ornamentation of these vessels consists either of combinations of incised lines, or else of impressions made with the teeth of a small comb-like instrument.[4]

The highest attainment of the iron-age potters in Ireland is a covered vessel from Danesfort (Kilkenny), ornamented with a finely-traced linear decoration. The pattern does not suggest to the mind the special characters of La Tène ware; the vessel may be even later than that period. In shape, it seems to be an imitation of a metal original.[5]

But the few relics of the La Tène period which we possess do not give us more than a superficial idea of the wealth of ornament that there must have been in Ireland at the time. We can picture in our imagination timber houses of no little

[1] Reference may be made further to a short note by Armstrong in JRSAI liii p. 17: Wilde, *Catalogue* pp. 94, 122.

[2] *Archæologia*, vol. lii part ii p. 315 ff.

[3] These facts will be considered at length in the as yet unpublished report upon this excavation.

[4] Examples of lake-dwelling pottery are figured in Wood-Martin, *Lake-Dwellings of Ireland* pp. 91 ff.

[5] Described by Rev. J. Graves in JKAS vi p. 168.

elaboration, their woodwork carved inside and out with the fantastic curves of La Tène decoration: men and women walking in garments embroidered with similar patterns: wooden household utensils decorated in like wise: leather-work, gold, bronze, all contributing to the beauty of the picture.

Dwellings and Defences

Over the whole area of Ireland there is scarcely a townland which does not contain one or more examples of defensive fortifications, most commonly in earth. The number still existing is enormous, and the number that has disappeared before the plough must be very great, and is unfortunately increasing. They present problems of no small complexity, and of surpassing interest: but no satisfactory solution of those problems can be attained until the structures have all been thoroughly surveyed and recorded. It will then, and not till then, be possible to classify them into types, and thereafter to determine whether those types are distributed geographically on any recognized system. The great majority of these structures is recorded on the Ordnance Maps: but in the first place these indicate plans and not profiles; and in the second place the plans themselves are necessarily minute, and cannot give the minor details. Those who would seek to study the early fortifications of Ireland from the Ordnance Maps alone—at present the only approach to a complete record of them—will find themselves repeating the experience of Christison in Scotland,[1] and of Baring-Gould in Wales.[2] The words of the latter are worth quoting:—

> "The original maps, as drawn by the surveyors, would perhaps show a much better plan than has been actually published. This is due to the drawings having been gone over by officers after the plans had been made, who struck out a quantity of detail as unimportant, because they themselves were indifferent to matters of archæological interest. I had an opportunity of seeing some of these original drawings with reference to remains of considerable value from an antiquarian point of view, which I asked the Ordnance Officer to insert in a new edition. The officer most readily and graciously sent down a surveyor to plan what was desired, when to our mutual surprise we found that this had been done with conspicuous accuracy on the occasion of the survey, but had been subsequently cut out by the revisers."

In the circumstances it is not yet possible to give more than a general description of these structures. In any case

[1] D. Christison, *Early Fortifications in Scotland*, Edinburgh, 1898, Preface, p. vi.

[2] S. Baring-Gould, "Early fortifications in Wales," *Trans. Honourable Society of Cymmrodorion*, 1898-99, p. 2.

we may, for our consolation, reflect that more could hardly be attempted in a book such as this. They demand a special treatise to themselves; indeed, this can be said of every one of the different classes of antiquities that come under our notice in the present study.

The simplest possible form of fortification is an enclosure surrounded with an earthen wall. The earth of the rampart being taken from the spot, not transported from a distance, the heaping up of the mound necessarily involves the digging of a ditch: and thus enclosures of the type which can be described in classificatory language thus—an outer fosse or trench: a vallum or rampart just inside it: an enclosed area—occur throughout the country in thousands. There is a considerable range of variety in the size of the enclosed area; it may be 15 or 20 yards, or even less, in diameter, or it may be an acre or more in extent. In shape, the majority of the enclosures are circular; frequently, if not habitually, so truly circular that we must assume that they were artificially laid out, by means of a cord attached to a central peg, and used as a guiding radius. But rectangular (square or oblong) [1] enclosures are fairly common, and we find many of unusual form, such as D-shaped, semi-circular, or oval enclosures.

The very few attempts that have been made at excavating these enclosures have been unproductive, so far as is recorded. In the simplest of them there is no trace of any enclosed building, and often there is no indication of an entrance through the rampart itself. As a rule the outer fosse has become partly filled up with earth washed in by rains, and the rampart has been reduced by the same agency to a height that must be insignificant compared with what it formerly was. An enclosure of the kind must have been accessible only with difficulty when there was no entrance-gap.

When there is a formal entrance-gap, and no enclosed building, the structure is most likely to be explained as a cattle-pen. The cattle-owners of ancient Ireland had a deadly enemy to contend with, which no longer troubles the farmer: the wolf. Inside the earthen enclosure, which was doubtless supplemented with a fence of brushwood on the top of the vallum, and guarded by watchmen, the cattle would probably be as safe as care could make them. When there is an enclosed building, we are probably to regard the enclosure as the site of a simple farm-steading belonging to one of the poorer ranks.

[1] Square forts are generally supposed to be later than circular forts, but this is not absolutely proved. A good example of a square fort near Castlecomer (Kilkenny) is illustrated in JKAS ix p. 4; references to other examples are given in the same page.

When there is no entrance-gap, the problem is not so easy. Many of this kind must have been sanctuaries, probably enclosing graves. Such are the "Giant's Ring" and the cist-burial at Furness, to which reference has already been made. The absence of a gap is then easily explained: there was no entrance, because no one was supposed to enter: there was no exit, in order that the ghost should not break out to trouble the living. The superstitious fear of these structures, traditional down to our time, accords best with this explanation. Excavation, under proper scientific superintendence, could alone settle the question of purpose in every case.

As a rule, the fosse is outside the vallum. Exceptions, in which the fosse is inside, are very rare, though not unknown.

Starting from this simple form, we can indicate a scheme of classification depending on a gradual increase of elaboration. But we must beware of supposing that chronological deductions can be drawn from the degree of elaboration which any special fort may present. There is no reason at present known to suggest that the simplest forts are necessarily also the oldest. In any case, these earthen enclosures cover a very long period of time. The oldest are at least as old as the Bronze Age, witness the Giant's Ring and others that can be dated to that period. But others must come down to times quite close to the Anglo-Norman invasion. In some of them, Ogham-inscribed stones have been appropriated for building material by the fort-builders, without reference to the inscriptions which they bear. We must allow time for the representatives of the owners of these monuments, who presumably would have protected the memorials of their kinsfolk, to die out, before the stones were utilized. A fort containing Ogham stones in its construction can scarcely be so old as the seventh century, A.D., and may be as late as the tenth.

The owner's rank, and his wealth—which comes to pretty much the same thing—is not unlikely to have been the chief factor in determining the plan of the fortification. From the valuable and authoritative tract called *Crith Gablach*,[1] which is concerned with the privileges and disabilities of the various castes of society in ancient Ireland, we learn that the size, and to some extent the design, of a man's house was regulated by his rank in life. It is not easy, however, to establish a correlation between the prescriptions in this and other documents on the one hand, and the remains of antiquity in the fields on the other; because these deal with different matters. When the legal documents were drawn up, the most conspicuous and

[1] *Ancient Laws of Ireland* (Rolls Series) vol. iv p. 298 ff.

important part of a steading would naturally be the house itself, and its outbuildings. But for us nothing of these is left. Just as the palæontologist has no materials to work upon but the fleshless skeletons of the extinct beasts with which he has to deal, and has no means of ascertaining their surface markings, so the archæologist has only those parts of ancient structures which were made of permanent materials. When we visit one of the ancient ring-forts of earth, we may quite legitimately picture a wooden house within it, which may have been as elaborately ornamented with carving as the house of a Maori chieftain. But there is nothing tangible to guide our fancy.

The three elements of variation upon which a classification of these enclosures must depend—in addition to the size and the shape of the plan, which have been already indicated in considering the simple structure with a single rampart—are: (1) The number of the surrounding ramparts; (2) the nature of the buildings enclosed, if any; (3) the presence or absence of an underground souterrain, and its degree of elaboration. We may further add, (4) the number of areas enclosed in an assemblage of mounds.

(1) Earthworks with a single rampart are the commonest; but there is a very large number with a double rampart—two lines of fortification concentric with one another. The ramparts follow one another immediately—that is to say, there is space for the fosse, and no more, between the two ramparts. This rule is invariable, so far as the knowledge and experience of the present writer extends.

There is most commonly an entrance-gap in each rampart. These may be in line with one another, in which case there is usually a raised causeway interrupting the ditches, so that a visitor may enter dry-shod. (Water often lies for a long time in the ditches, after heavy rains, and in districts where the clay is not very porous.) There are, however, many cases in which the two doorways are not in line; the gateway of the inner rampart may be a quarter of the circle round from the gateway of the outer rampart. In such a case an invader would be obliged either to climb over the inner rampart in front of him, or to walk, or wade, through the intermediate ditch, with his flank turned to the defenders of the fort, till he reached the inner doorway. Obviously this is the purpose which such a disposition is intended to secure. Sometimes, but very rarely, there is a megalithic entrance to the enclosure. One such is to be seen near the village of Cowrooch, Aran: another, near Rinvyle (Galway), is illustrated by Kinahan.[1]

[1] JRHAAI x p. 282.

Forts with a triple rampart are much less common than those with a double rampart. They do not differ essentially from the double rampart, except in the additional vallum with its concomitant fosse. In some cases, however, there is an important peculiarity of treatment. The central rampart is made broader than the others, and a sunk causeway is constructed on its summit, surrounding the entire enclosure. This is clearly a standing-ground for the defenders, as they endeavour to repel the attacking force. Triple rings of this type appear to be surrounded with a quadruple rampart, when carelessly inspected. As a fact, quadruple rings are very rare, though not unknown. I do not find that forts with more than four rings are reported as existing.

(2) Few relics remain of the structures which must at one time have been contained within many of these enclosures. All wooden buildings have long ago yielded to thieves, to fire, or to damp and dry rot. Stone building was in a very rudimentary condition down to a comparatively late date in Ireland, so that the only buildings that any of these structures contain above ground are the remains of rude beehive huts of dry stone. There is not infrequently an L-shaped foundation close to the doorway, which we may presume to have been the base of a lean-to shed for the accommodation of the porter. There is no evidence from which we may determine the nature of the door-fitting, or the means of securing it: nor is there any system, so far as the recorded material permits us to judge, on which the surviving fragments of buildings are distributed over the surface of the enclosure. Though there are many thousands of these structures remaining in the country, each of them, if we except the very simplest types, possesses its own individuality. For one man to visit and plan them all would be impossible: until we shall have at our disposal a satisfactory collection of surveys, we shall be unable to determine the principles on which the details of the structures were planned.

(3) The souterrains are the most interesting parts of the earthen forts as they now remain. As the name implies, they are passages and chambers constructed underground (Plate III Fig. 2).

The exploration of a souterrain is often very difficult, owing to the amount of mud, earth, and stones that have accumulated since the abandonment of the fort—not to speak of dead sheep and other unpleasant things, which are often cast into these receptacles to get them out of the way. Presumably there was once a building of some kind erected over the entrance, which prevented rain from washing in and filling the opening with silt; but now this process goes on unrestrained. Usually



FIG. I—STONE CIRCLE AT TEMPLE BRYAN, CO. CORK

FIG. 2—SOUTERRAIN OF AN EARTHEN FORT NEAR KILLARNEY, CO. KERRY

the explorer is obliged to crawl uncomfortably over stones, which often have unavoidable sharp points, or else through a slush of sticky mud, where originally there may have been a chamber or passage 6 or 7 feet in height.

In constructing a souterrain, a deep trench was dug, of the predetermined size and plan. The sides of the trench were then lined with stones, put together as in an ordinary dry-stone wall. A facing of stone pillars or slabs on end might or might not be set up in front of the dry-stone lining. Over the passage, at a height of, say, 6 or 7 feet from the floor, a row of horizontal lintel-stones was laid down. The trench was then filled in above the lintels, up to the level of the surrounding surface of the ground. The depth of the lintels beneath the ground is never very great: the presence of a buried souterrain may sometimes be detected by the difference in the vegetation growing on the ground, as the stone lintels prevent the growth of plants with deep tap-roots, though these may grow freely elsewhere within the enclosure.

When the space to be roofed was too wide to be spanned by a lintel of manageable length—which was sometimes, though not very often, the case—the ends are supported on slabs corbelled out from the wall, in the manner of a cantilever.

Sometimes the souterrain is simply quarried out in stiff boulder clay, which can be trusted to stand by itself without stone lining or roofing. This, however, is not very common.

A hole, usually at or about the middle of the enclosed area, gives admission to the souterrain. But in this, as in all other details of these structures, there is much variety. The entrance-hole is sometimes not in the middle but at the edge of the enclosed area, just inside the inner rampart. It may even be between the ramparts, though this is not common. Sometimes there are two or more souterrains, each with its own entrance.

The simplest form of souterrain is a single small chamber—measuring, say, some 6 to 8 feet in length, and 3 or 4 feet in breadth; but the range of variation in the dimensions is considerable, though the chambers are never of very large size. The following further varieties are possible, and can be illustrated by actual examples :—

1. A passage leading to a small chamber.

2. A succession of small chambers, two up to about five or six in number, each of them opening out of the one before. A greater number of chambers is exceptional; but there are seven or eight in a souterrain at Scart (Kilkenny)[1] and nine in another at Clochane (Kerry).[2]

[1] JKAS i p. 386. The vague statement of the number of chambers belongs to this notice.

[2] PRIA xix p. 105.

3. A passage as in type (1), but with side branches consisting (*a*) of chambers, (*b*) of passages leading to chambers, or (*c*) of passages leading to roof-openings affording an exit, either within or without the enclosure.

4. A passage with or without traps and blinds to baffle pursuers, leading to an exit outside the enclosure.

The passages may be straight or curved; and as has already been mentioned, Ogham-inscribed stones are sometimes to be found among the lining-stones or lintels, thus giving a hint at the date of the structure. In one case (at Achacarrible, Kerry), there are three Ogham stones, and also a stone with two crosses upon it, shewing clearly that the construction of the souterrain took place after the introduction of Christianity.[1] On the other hand, the presence of a souterrain beneath the church of Dunbullog (Cork),[2] and another close to the cathedral of Killala (Mayo),[3] may be illustrations of the reconsecration of originally pagan sites to Christian uses.

In some cases there are two storeys of passages, one running beneath the other; but this is very unusual.[4]

It is not a necessary rule that a fortification with elaborate earthworks has an elaborate souterrain. Exploration has not advanced sufficiently far to justify us in asserting categorically that *the exact contrary* is the case; but certainly my own observations seem to point in that direction. Forts with three imposing ramparts often have no souterrain at all, or merely a small chamber;[5] while others, with but one rampart, often have a souterrain which is quite labyrinthine.

Probably the simple chambers and passages were underground store-chambers. It may be objected that they must have been too damp for such a purpose; but (as has been mentioned above) means were presumably taken, when the site was in use, to prevent the rain from penetrating. They are scarcely fit for habitations; and the only other feasible explanation—that they were sepulchral *hypogæa*—is improbable, in view of the evidence of habitation remaining in many of the earth-forts containing souterrains.

Souterrains which are in the form of passages leading to an exit outside the fort must have served a different purpose. Most likely these were sallyports, through which the defenders

[1] This cross-stone is roughly illustrated in *Kerry Archæological Magazine* i. p. 14.

[2] JKAS i p. 384.

[3] JRSAI xxviii pp. 291-2.

[4] A good example is described by Rev. W. Falkiner, "Notes upon a rath souterrain at Gurteen, Gainstown, Co. Westmeath," PRIA xxi p. 211; but it must be remarked that it is not easy to reconcile the plan with the drawings accompanying this paper.

[5] Of course, excavation would, in all cases, be necessary to be absolutely certain that no souterrain exists; but there is a sufficient number in which the souterrain is open and accessible for at least a preliminary generalization.

could escape with their lives if they failed to hold their ground against an attack. Most interesting among souterrains of this class are those containing puzzle-passages. In these the straight way leads to a *cul de sac*, while the road to safety is a branch passage, hard to find, opening out of the side or the roof of the main passage.[1]

Souterrains with hidden chambers are analogous to those with puzzle-passages. An entrance-hole leads to a small chamber, which at first sight appears to be all that there is to be seen. But the chamber is floored with flagstones, and concealed underneath one of these there is a hole which opens in the roof of a second chamber underneath.[2] Here the most treasured possessions of the defenders would be stored, in the hope that the spoilers would fail to find them. We may, perhaps, see in these primitive " burglar-proof safes " tangible relics of the terrors induced by the Víking raids.

Sometimes souterrains are found in the open fields, without any earthen enclosure. In such cases we must suppose that the outer rampart has been ploughed away. Rude pottery, rather late in aspect, and fragments of iron objects, as well as chips of flint, have been found in excavating souterrains in North-east Ireland.[3]

(4) It is sometimes to be found that there are minor *earthen* structures within the main enclosure ; as for example, a wall running more or less diametrically through the enclosed area, dividing it into two. Sometimes, but not very often, a very large enclosure may be found to contain one or more subordinate enclosures, each with its own ramparts. Sometimes two " forts " are placed in contact with one another, after the fashion of the loops of a figure of 8.[4] While the single-ramparted area is the commonest form of residential earthwork, there are numerous examples which are complicated in one or other of

[1] An example will be found, rather obscurely described, in JRHAAI xvi p. 11 ff. Other trap-souterrains are described by C. H. Foot at Doon, Offaly, JKAS vi p. 222 ; and by E. C. Rotherham, near Oldcastle, Meath, JRSAI xxvii p. 427. At Parkmore (Clare) there is a well-known example, described in JKAS i. p. 294 : a rather idealized section will be found in Wood-Martin, *Pagan Ireland* p. 208.

[2] This form is especially common in Co. Galway. Good examples are described, with excellent photographs, by Dr. T. B. Costello, " Tuam raths and souterrains," JGAHS ii p. 109, iii p. 1 : and H. T. Knox, " Caher and rath caves of Galway and Meath : suggestions for study of the caves of Ireland," *ibid.* x p. 1. See also vol. ix p. 178 of the same journal.

[3] H. C. Lawlor, " Some investigations on the souterrain," PRIA xxxv p. 214 : *Idem*, " Some notes on the investigation of dwelling-places of prehistoric man in north-east Ireland," PBNHPS 1915-16 p. 31, 1917-19, p. 77. See also M. Hobson, " Some Ulster souterrains," *Journal Anthropological Institute* xxxix p. 220. For further discussion see H. W. Gillman, " The problem of the souterrains," running serially through JCHAS II vols. ii and iii.

[4] A good example is Ráith Breanainn (Roscommon), described and illustrated by Mr. H. T. Knox, JRSAI xlv p. 289.

these ways. It is possible that some of these may not be residences, but may be explicable as sanctuaries or as temples.

In the foregoing description the names often applied to earth-works in Ireland—corruptions of Gaelic names, such as "rath" (properly *ráith*), "caher" (*cathair*), "cashel" (*caiseal*), "doon" (*dún*), "liss" (*lios*)—have been avoided. They are unmeaning to a student unacquainted with the Gaelic language, and, while doubtless they had definite significations in their original Gaelic, in their Anglicized form they have come to be used so loosely that they have been emptied of all specific import, and rendered scientifically valueless. Moreover, they obscure the fact that these structures are monuments of European Archæology, with close analogues elsewhere in Europe, and not exclusively Irish monuments. A good example of the undesirability of using such names may be quoted. We read[1] of the exhibition of "a green-stone celt" that was "found when levelling down a rath at Roughgrove". If we knew the nature of the earthwork, this might have been a valuable chronological datum. But it has been cleared away unmapped and unrecorded; and all that we are permitted to know about it is the vague word "rath," which is applied indifferently to earthen rings, or to tumuli, or to mottes, by writers who fondly persuade themselves that by so doing they will be considered very scientific!

The only approach to a satisfactory report on any excavation in one of these enclosures is that presented by Mr. J. G. A. Prim, to the Kilkenny Archæological Society on the excavation of a fort at Dunbell (Kilkenny), so long ago as 1852.[2] But though we call this an "approach to" a satisfactory work, it falls very far short, indeed, of the ideal.

There was here a large and elaborate double vallum enclosing an area, and, close by, three similar but smaller structures. Prim contents himself with describing the main structure as having been "constructed on so large a scale, and possessing its rampart and double fosse in such excellent preservation, as to be a prominent and most remarkable object in the landscape for miles round". No plan of the fort itself seems to have been made. Moreover, the work was undertaken primarily for agricultural, not for archæological purposes, and it was not superintended continuously. The antiquaries were content with visiting the place from time to time, purchasing from the labourers such objects as had accumulated since their previous

[1] JRHAAI xvi p. 181.

[2] J. G. A. Prim, "Notes on the excavation of a rath at Dunbell, county of Kilkenny," JKAS ii p. 119. See also summary descriptions of further objects from the same site in JRHAAI xv p. 81.

visit. The forts were being levelled by the farmer for top-dressing. One of the three smaller enclosures had long been destroyed in this way: another was trenched in 1842: the excavation described was that of the third and last of the smaller forts, all of which was practically obliterated at the time when the report was presented to the Society. Later the great fort itself was attacked, but without much result:[1] it is not altogether clear from Prim's final communication, recording this subsequent work, which objects were yielded by one fort and which by the other.[2]

Notwithstanding these faults, the action of Mr. Prim and his friends was preferable to that of collectors who ransack such objects to enrich their cabinets, but without a thought for the claims of patriotism, to say nothing of the yet more imperative claims of science. Having got what they want, they take no trouble to publish their results: and when they depart this life their heirs disperse their accumulations to the four winds.

Enormous quantities of bones were found in the Dunbell excavation. Incidentally, it throws a sidelight on economic conditions in Ireland to read that the labourers contracted themselves to the farmer for no other wage but the bones, which they sold on such terms as to realize from two to three shillings a day. On the other hand, they seem to have made a rich harvest out of the antiquaries who visited the works, and who were evidently confronted with the difficulties inevitable in such cases: concealment of finds if the rewards offered were deemed insufficient, "salting" and actual forgery if they were satisfactory. The bones belonged to red and fallow deer, ox (*Bos longifrons*), horse, swine, and, it is said, domestic fowl. Most of these were in the inner fosse, which appears to have been the recognized midden of the establishment; but they were also distributed in thick layers through the central area of the fort, down to a depth of 2 feet from the surface. No human bones seem to have been found. The objects were all of late date, being similar to those that come to light in the lake-dwellings or "crannogs" of the seventh and eighth century, A.D. They included querns, sharpening-stones, sling-balls, spindle whorls, buttons, beads, and amulets in stone. Some discs of stone with a rude linear ornament scratched upon them, contained in the collection[3] are of very doubtful authenticity. In bone and horn there

[1] As would appear from a short note in JKAS iii p. 133.

[2] J. G. A. Prim, "On the discovery of Ogham monuments and other antiquities in the raths of Dunbell, county of Kilkenny," JKAS iii p. 397.

[3] The collection of objects from this excavation, the property of the Royal Society of Antiquaries of Ireland, is housed in the National Museum, Dublin.

were pins, beads, combs, and knife-handles; in bronze there were pins and simple ring fibulæ, with one or two other odds and ends, the most curious being a small box, "about the substance of a half-crown" consisting of two parts hinged together; and a long narrow strip of bronze shewing some trace "of an illegible mediæval inscription, the letters being apparently in the Roman character". In iron there was a small cow-bell, which we need not assume with the finders to have been "used for religious purposes" by the inhabitants; there were also pins, fibulæ, knife-blades, shears, an axe, a goad, a chisel, some horse-shoes, and a reaping-hook. Other "finds" were: some fragments of baked and glazed pottery and of leather shoes, as well as some much later objects (such as a halfpenny of William and Mary). An underground passage was found in the rampart of the smaller fort, at the entrance to which were two stones with Ogham inscriptions, thus confirming the late date of the structure to which the antiquities uniformly bore testimony. At a subsequent date a pin with attached ring, and the clasp of a book-cover, came to light. The pin seems to have been exceptional in that the ring was not one single piece, but had been formed in a number of segments, jointed together. The book-clasp bore simple key and interlacing patterns, certainly of the Celtic Christian period, but without any specially distinctive character.[1]

The greatest of the earthen fortifications are surpassed in magnificence by the *Stone Forts*, which rank among the most imposing of the ancient monuments of Ireland. The history of their origin is completely unknown; for but little weight can be attached to the ætiological myth that they were erected by the Fir Bolg to protect themselves against their Milesian oppressors. They have generally been assigned to the Bronze Age, and this dating has been accepted in IPCT; but on the whole a more moderate estimate of their antiquity is perhaps preferable, though the question can by no means be considered as closed. No datable objects have ever been found in essential association with any of these monuments.

The following are the chief monuments of this class remaining in Ireland:—

Grianán Ailigh, near Derry. A circular area, 77 feet 6 inches in diameter, surrounded by a stone wall with one entrance. The wall is 15 feet thick, and is built in stages on the inner face (a characteristic common to all these structures). Openings on the inner face of the wall give admission to two passages running for part of the way along its axis. There is an enig-

[1] For these objects see illustrations in JKAS vi pp. 307, 308.

matical building in the centre of the area. Outside the stone wall there are three earthen walls. It is estimated that the stone wall encloses an area of ¼ acre, and the outermost earthen wall about 5½ acres.[1] This structure was still in occupation in the year 939 A.D.[2]

The great forts are on the islands of Aran (Galway). That these barren islands should have needed such gigantic defensive structures is a fact extremely difficult to explain. Much has been written about these buildings ; all the cream of the previous literature is gathered in two papers by Mr. Westropp, to which the reader must be referred for full details.[3] Some of Mr. Westropp's plans and illustrations are reproduced in IPCT, pp. 268-74. The following are the structures in question :—

Dún Aonghusa, stands on the edge of a tall sea-cliff that rises about 300 feet from the water. The encroachment of the sea has apparently carried away about half of the fort, as it would hardly have been placed in so dangerous a situation from the first. At present all the enclosing walls are horse-shoe shaped, the seaward curve having fallen, with the area on which it stood, into the sea. The entire structure is fated inevitably to be devoured by the sea sooner or later. In spite of some indefensible reconstruction, euphemistically described as " restoration," which the fortification suffered in the last quarter of the nineteenth century, this building is one of the most striking prehistoric monuments in Europe. The inner-most enclosure, the wall of which is 12 to 14 feet thick, is 150 feet across at the edge of the cliff. Outside is another wall, shewing signs of having been rebuilt to another plan, enclosing a space about 470 feet in diameter along the edge of the cliff. Outside that again, there is a belt of fragments of broken stones, designed to prevent the fort being taken by means of a rush : there are two or three other examples of this device among the Irish stone forts.[4] Outside all there is a wall of irregular plan, enclosing an area measuring 1300 feet along the edge of the cliff.

[1] Most of the descriptions of this structure depend on the memoir contained in "Ordnance Survey of Co. Londonderry ; parish of Templemore" (Dublin 1835)—the sole monograph to see the light of the great series planned by Sir Thomas Larcom—in the section on Antiquities (the book is unpaged !). See also W. Bernard, " Exploration and restoration of the Grianan of Aileach," PRIA xv p. 415 : descriptions in JRSAI xxxii p. 302 and xlv p. 204.

[2] MacNeill, *Phases of Irish History* p. 266.

[3] " A study of the fort of Dun Aengusa in Inishmore, Aran Isles, Galway Bay ; its plan, growth, and records," PRIA xxviii p. 1. " A study of the early forts and stone huts in Inishmore, Aran Isles, Galway Bay," same vol. p. 174. See further, Earl of Dunraven, *Notes on Irish Architecture* (London 1875) pp. 1 ff. for good photographs of these monuments in their unrestored state.

[4] Such as the complex fort of Ballykinvarga (Clare), described by T. J. Westropp, JRSAI xxvii p. 122, xxx p. 400.

Dún Eoghanacht.—A circular enclosure about 90 feet in diameter, surrounded by a wall of large stones, at present 16 feet in height and about 14 feet in thickness. There are the foundations of three small stone chambers within the enclosure. The inner face of the wall is built in stages, staircases being provided to allow of these being mounted.

Dún Eochaill.—An inner enclosure 75 to 90 feet in diameter, surrounded by a wall of the usual kind, 20 feet in thickness; and an outer wall enclosing a space of about 200 feet by 250.

It is to be noted that the entrance doorways of these forts are all turned so as to face the nearest natural landing-place.

Dún Chonchobhair, on Inis Meadhon (the middle island of the same group), is another splendid structure. It is an oval, 227 feet by 115, surrounded by a wall 18 feet 7 inches thick and 20 feet high. There is an outer wall, which, however, does not completely surround the inner enclosure as in the other forts: it turns in to touch the citadel wall at each end.[1]

Near *Cong* (Galway) there was a magnificent fort, internal diameter 150 feet, thickness of walls 24 feet, height of walls about 10 feet, which was entirely cleared away in the first half of the nineteenth century to provide building material. Apparently the only record that exists is a brief notice in Petrie's manuscript account of Irish fortifications, in the Royal Irish Academy Library.

Similar forts are: *Staig*, near Waterville (Kerry),[2] and *Cathair Geal*, near Caherciveen.[3] These consist of large walls enclosing circular spaces. It is to be noted that almost all the great stone forts are in the western side of the island: the only considerable example in the east is *Ráith Gall*, near Tullow (Carlow), which was first brought to notice by Dr. G. H. Orpen.[4] This is a circular space, enclosed by four stone ramparts: the inner space measures about 150 feet, the outermost enclosure about 1000 feet in diameter.

But it is impossible here so much as to enumerate the stone forts of Ireland. Although those mentioned above are the most important, there are many others that are scarcely inferior to them in interest. The great series of stone buildings of all kinds in the south-west of the Dingle Peninsula must not be passed over without some allusion; but for details regard-

[1] Description and plan in JRSAI xxv p. 267.

[2] On which see Dunraven, *op. cit.* I p. 24: TRIA xiv p. 17: JRSAI xxvii p. 316, and literature there noted.

[3] See Dunraven, *op. cit.* I p. 22.

[4] "Rathgall, Co. Wicklow," JRSAI xli p. 138: "Rathgall, Co. Wicklow, Dun Galion and the 'Dunum' of Ptolemy," PRIA xxxii p. 41.

ing these the author may refer the reader to the special monograph which he has published on these structures.[1]

Only one example of a *vitrified fort*, a type of structure characteristic of Scotland, has been reported from Ireland. It is at Shantemon (Cavan), though little of it is left, as much of the material was carried away by the neighbouring "gentry" for the purpose of making rockeries.[2]

The vitrified forts in Meath and Donegal, mentioned by Christison (*Early Fortifications in Scotland*, p. 190), on the authority of a writer in the *Transactions of the Glasgow Archæological Society*, may be dismissed. There is no evidence for them, and the writer in question was probably quoting inaccurately from memory. Petrie, in his manuscript essay on *Military Architecture in Ireland, previous to the English Invasion*, preserved in the library of the Royal Irish Academy, speaks of others: his words are: "Under this head (i.e. *Dún*) should be noticed that remarkable class of fortresses distinguished by the vitrification of their walls, and of which the first example was discovered by a distinguished member of the Academy, the Rev. Cæsar Otway, in the county of Cavan. Four others have been since found in the county of Londonderry in that portion of it anciently possessed by the Cruithnigh or Irish Picts, and it is not improbable that they were all the work of that people."[3] Petrie does not specify where in this county these forts are situated, and I have never found any other reference to them. Wood-Martin,[4] quoting UJA I iii pp. 113-14, tells his readers of a vitrified fort at Drumbo (Down). The quotation must, however, be stigmatized as culpably careless: reference to the pages specified reveals the fact that the only vitrification in question is the mark produced by a fire that some one lit inside the *Round Tower* at Drumbo, and that the passage is a censure upon Henry O'Brien, for confusing the tower, thus casually disfigured, with the "Giant's Ring," and both with a vitrified fort which has no existence whatever.

A special kind of fortification is the *fortified headland* or *promontory fort*; of which we need say no more, by way of description, than that it consists in a wall carried along the base of a precipitous headland jutting into the sea. The whole of Ireland is girdled with a ring of such strongholds, many of which are of no small interest. The most remarkable, perhaps,

[1] "On an ancient settlement in the south-west of the Barony of Corcaguiney, Co. Kerry," TRIA xxi p. 209.

[2] Cæsar Otway, "Observations on some remains in the county of Cavan, supposed to be those of a vitrified fort," TRIA xiii p. 123: W. P. Moore, "Vitrified fort at Shantamon, Co. Cavan" (title only), PRIA v p. 69.

[3] MS. essay, pp. 48, 49; fair copy, pp. 103, 105.

[4] *Pagan Ireland*, p. 184.

is the fort called *Dún Beag*, in the Dingle Peninsula series just alluded to. This is a thick wall drawn across a triangular headland, with guard-houses formed in the thickness of the rampart, and ingenious devices for blocking the entrance against unwelcome intruders. Outside the stone wall there are four earthen walls; and a souterrain runs underneath. There is one building erected on the headland thus protected.[1]

An especially important promontory fort is one called in all the books "Dubh-Chathair," the "Black Fort" on the Great Island of Aran.[2] It has suffered severely from inroads of the sea, and from injudicious restoration; at present it consists of a huge wall, over 200 feet in length, cutting off a tongue of land with high precipices on each side, and protected on the landward side by an abattis of broken stones like that in front of Dún Aonghusa.[3]

A promontory fort well worth mentioning, if only for its picturesqueness, is Dunbriste, "the broken fort," in North Mayo. Here the encroachment of the sea has cut the once fortified headland away from the coast-line altogether, so that what is left of the fort now stands, completely inaccessible, on the summit of a precipitous wall of rock about 150 feet in height.[4]

There is a remarkable *inland* promontory fort, though this may seem to the reader to be a contradiction in terms! It is the great structure called *Cathair Conroí*, near the eastern end of the Dingle Peninsula: it gives its name to the mountain on the summit of which it stands. The top of the mountain is a flat space, measuring about a couple of acres in extent, and is triangular in shape. Two sides of the triangle are precipitous, but the third is easy of access from the *col* connecting the mountain summit with the next beside it. Across the base of the triangle, connecting the two precipices, a slightly curved wall has been built, with a single gateway in its course. This wall was about 350 feet in length, 15 feet 6 inches in width, and something over 10 feet high. It is now much ruined.[5] Some excavations were carried out within the enclosed area, but without result.[6]

Mr. T. J. Westropp, who studied the ancient "forts" of

[1] Macalister, *op. cit.* p. 220: P. J. Lynch, "Notes on Dunbeg Fort," JRSAI xxviii p. 325: T. J. Westropp in JRSAI xl p. 267.

[2] I suspect that this name has been taken down incorrectly, and has now been foisted on the local speech, like the ungrammatical perversion "Dŭn Ang-gŭs".

[3] See Mr. Westropp's full description in PRIA xxviii p. 179. See also JRSAI xliv p. 333.

[4] See a photograph and description by T. J. Westropp in JRSAI xlii p. 104.

[5] P. J. Lynch, "Caherconree, Co. Kerry," JRSAI xxix p. 5.

[6] R. A. S. Macalister, E. C. R. Armstrong, and Rev. H. Browne, "Cathair Conroí and neighbouring structures," JRSAI xli p. 46.

Ireland more closely than any other investigator, came to the following general conclusions about them :—

1. The key to the origin of the Irish forts lies as much in a comparison with cognate buildings over the rest of Europe as in the native Irish records.[1]

2. The legend assigning certain structures to the "Fir Bolg" is of value for two or three forts only. It does not even touch many of the structures of Kerry, Cork, Mayo, and Ulster, still less the British and Continental examples.

3. So far as the evidence goes, such structures were built and re-built from a time long antecedent to the introduction of Christianity down to (probably) the fourteenth century.

4. Their arrangement in groups and lines has analogies all over Europe.

5. Very few of the forts are defensive in the strict military sense.

6. The masonry depends on geological, not on racial circumstances.[2]

7. The architectural features are stereotyped by the material utilized in the construction.

8. There are traces of the use of the hammer in the masonry dressing, but not of the chisel.

9. Probably wood was used for steps and lintels. Mr. Westropp enumerates certain forts in which there are gateways too wide for stone lintels, and mentions one, with recesses in the wall and terraces, which would be accessible only with the aid of ladders.

10. Water supply was deliberately excluded from the scheme of the construction, Mr. Westropp believes for sanitary reasons.

11. Most of the features existing in the Irish forts appear as commonplace phenomena of the buildings of the earlier Middle Ages described in the body of Irish literature.

The same writer, on the basis of an enumeration of the forts marked upon the 6-inch Ordnance Maps, gives the following statistics of the number of forts in each county,[3] and of the average number of acres to each fort. Of course, such statistics can be no more than approximate, and make no allowance for the large number that must have been destroyed. In ascending order of the latter figure, the list is as follows (see p. 176).

Very common through the country are old open-air cooking-places, marked usually by layers of ashes. The country people call them *fulacht fiadh*, "deers' roast". Troughs of wood or of stone have sometimes been found in them, it is supposed, for boiling water by means of hot stones. But as a rule the deposits contain hardly anything but ashes. These are sometimes laid upon flat stones, sometimes under the protection of

[1] An excellent synopsis of the European material, with many illustrations and bibliographical references, will be found in A. Guébhard, "Camps et Enceintes" (Congrès Préhistorique de France, Autun meeting 1907, report p. 997 ff.).

[2] See a note by Mr. H. S. Crawford in JRSAI lv p. 67, indicating the technical defects of the masonry.

[3] "The ancient forts of Ireland; being a contribution towards our knowledge of their types, affinities, and structural features," TRIA xxxi p. 579; see especially p. 587.

Limerick	2147	forts,	317	acres to each fort.
Sligo	1472	,,	327	,, ,,
Clare	2419	,,	343	,, ,,
Westmeath	1184	,,	383	,, ,,
Longford	653	,,	412	,, ,,
Tipperary	2244	,,	427	,, ,,
Monachan	706	,,	452	,, ,,
Roscommon	1276	,,	471	,, ,,
Cavan	909	,,	525	,, ,,
Kerry	1988	,,	596	,, ,,
Cork	2930	,,	630	,, ,,
Mayo	2147	,,	637	,, ,,
Leitrim	536	,,	732	,, ,,
Galway	2162	,,	775	,, ,,
Kilkenny	627	,,	813	,, ,,
Down	664	,,	921	,, ,,
Waterford	510	,,	923	,, ,,
Meath	545	,,	1061	,, ,,
Fermanach	397	,,	1147	,, ,,
Carlow	178	,,	1243	,, ,,
Antrim	618	,,	1261	,, ,,
Louth	146	,,	1390	,, ,,
Leix	251	,,	1690	,, ,,
Wexford	334	,,	1725	,, ,,
Offaly	265	,,	1870	,, ,,
Tyrone	393	,,	2051	,, ,,
Wicklow	225	,,	2223	,, ,,
Kildare	185	,,	2310	,, ,,
Derry	189	,,	2728	,, ,,
Armagh	190	,,	3726 [1]	,, ,,
Dublin	58	,,	3905	,, ,,
Donegal	215	,,	5550	,, ,,
Total	28,763			

a curved earthen mound. Nothing has even been found within the ashes to give a clue to the date of the deposit.[2]

All the fortifications that have been described above, in earth or in stone, may be called personal or family fortifications, or at most village fortifications. It is likely that within the great stone enclosures there were groups of huts in which a village community lived under the protection of its massive walls: while the smaller forts would obviously not protect more than the family and goods of one man. But there are, in addition, certain territorial ramparts, designed to protect those on one side against raids from the other.[3]

Especially conspicuous among these territorial fortifications is the famous "Danes' Cast" or "Black Pig's Dyke," which runs across the whole of Ireland, from Bundoran (Donegal) to

[1] Misprinted 8726 in the original publication.

[2] See a communication on the subject by W. Hackett, JKAS iii p. 50: also G. W. Forsayeth, "Prehistoric cooking-places," JRSAI xliii p. 178.

[3] A list of these will be found in Westropp, *Ancient Forts of Ireland* p. 715 ff.

the head of "Carlingford Loch". It is now much levelled by agricultural operations; to judge from surviving portions, it consisted of a vallum, 30 feet thick at the base, and about 20 feet high, between two trenches, each about 10 feet deep. The structure was not a mere mound of earth; it was strengthened with oaken beams, which served to tie the materials of which it was composed together. At or near its eastern end is a huge fortification of an irregular oval shape, not less than one-and-a-quarter mile in length, west to east, and 400 yards broad, north to south. This fort is known in modern times as the Dorsey, a corruption of *Doras*, a door or gateway, indicating that it guarded the entrance into the territory fortified by the dyke.[1] The actual line is difficult to recover, partly because of its imperfect condition, and partly because of a number of fragments of fortification that cannot be made to work in with the main course, and that probably represent successive rectifications of the boundary. There can be little doubt that the idea of carrying such a great defensive earthwork across the whole island was suggested by the example of the Roman walls in North Britain: the structure under notice has been plausibly explained as a defensive work of the Ultonian kings, designed to check the unifying policy of the Connacht dynasty of King Cormac mac Airt between the third and fifth centuries, A.D.[2]

Inauguration Places

The social and political constitution of Celtic Ireland is a subject far too extensive to be touched upon in the present work. We therefore pass it over, referring the reader back to the remarks in Chapter I, which he can profitably supplement by a perusal of the writings of Professor MacNeill.[3] Let it suffice here to say that the population of the country was subdivided into a number of groups, each occupying a territory, large or small as the case might be, and ruled over by kings selected from the members of a ruling family, chosen by a

[1] See Rev. H. W. Lett, "The Dun at Dorsey, Co. Armagh," JRSAI xxviii p. 1.

[2] See MacNeill, *Phases of Irish History* pp. 130-2: and for a full description of the dyke, and discussion of its problems, as well as an account of the legends to which it owes its name, see W. F. de V. Kane, "The Black Pig's Dyke; the ancient boundary fortification of Uladh," PRIA xxvii p. 301: *Idem*, "Additional researches on the Black Pig's Dyke," PRIA xxxiii p. 539: H. S. Crawford, "The Black Pig of Kiltrustan," JRSAI xlviii p. 80. For other fortifications of the same kind see Kane "The Dun of Drumsna," PRIA xxxii p. 324, and T. J. Westropp ("A long earthwork in the western border of Meath"), JRSAI xlv p. 170.

[3] Reference may also be made to the chapter on *Population* in the Cambridge *Geography of Ireland* (Cambridge 1922).

peculiar and complex law of dynastic succession, which Professor MacNeill was the first to elucidate.[1] A new ruler, on his accession to power, was inaugurated with certain traditional rites, held at certain traditional places. The nature of the rites seems to have varied considerably in different communities. We are told by Giraldus of a savage totemistic rite, in the North of Ireland, in which the neophyte imitated the actions of a horse, and bathed in a broth of mare's flesh.[2] Another writer tells us of a solemn function in which the chief chronicler of the territory read before the neophyte a book called *The Instruction of Kings:* the neophyte then gave sureties that he would follow the precepts of the book: and the chronicler then put into the hand of the neophyte a wand, a symbol of his authority over his future subjects; which wand was white, to symbolize truth; straight, to symbolize uprightness, and smooth, to symbolize justice and equity.[3] In a separate study the present writer has endeavoured to reconstruct the inauguration rites of the kings of Tara.[4]

In the passage of Keating's *History*, just quoted, there is a list of inauguration-places, at which these rites, of whatever their nature, took place. Some of these still retain traces of their earthworks and stone structures: though they are insufficient for us to recover the ritual completely. Two of the most important of these rites are Carnfree (Roscommon),[5] the inauguration-place of the Ui Conchobhair of Connacht, and Magh Adhair, the inauguration-place of the Dal gCais. From these sites it appears that the most important feature of the establishment was a burial mound, presumably the tomb of the traditional founder of the family. Other features are standing stones, rock-cut basins and troughs, and, at Carnfree, a seat built of small stones. An inauguration chair, that of the rulers of Clann Aodha Bhuidhe ("Clandeboye") is now preserved in the Museum of Belfast. It is very roughly fashioned out of a block of stone; indeed, "fashioned" is hardly the word, for it appears to be a mere *lusus naturæ*, like

[1] *Celtic Ireland* p. 114 ff.

[2] Giraldus Cambrensis, *Topographia Hiberniæ* III xxv. Though Keating and others have violently repudiated this story, it can hardly be wholly without foundation. The inhabitants of the northern part of the island who, as we have just seen, resisted the enlightened unifying policy of the southern monarchs, were less civilized than were those of the rest of the country. Even in the twelfth century, although fine stone churches had been built elsewhere in the country, they continued to build in wood, and did not apparently believe in the possibility of any other material being employed. See St Bernard's *Life of St Malachy*, tr. H. J. Lawlor, p. 110.

[3] Keating, *History* (Irish Texts Society edition), vol. iii p. 10 ff.

[4] See PRIA xxxiv p. 323 ff.

[5] Described with illustrations in JRHAAI xi (1870-1) p. 250. See also JGAHS ix p. 1.

the famous "Hag's Chair" which stands beside the principal carn at Lochcrew.[1]

Palace Sites

Of especial historical importance are the palace sites, in which the provincial and *tuath* kings established themselves. Of these the most noteworthy remaining are *Cruachu* [Rathcrochan (Roscommon)], *Emhain Macha* [Navan Fort (Armagh)], *Uisneach* (Westmeath), and *Teamhair* [Tara (Meath)].

Cruachu.—There are here numerous mounds, most of them evidently artificial, though some seem to be merely trimmed and scarped eskers, like a remarkable mound (mentioned in the preceding footnote), in the demesne of Masonbrook. The largest of these mounds is traditionally the site of the palace of Ailill and Medb, the best-known king and queen of Connacht. Close to it is the strange rift in the underlying rock which was supposed to afford a passage to the under-world, and which was probably the natural feature that first called attention to the site. The entrance to this cave is artificially built up, and two Ogham stones are used among the constructional material. In the neighbourhood is a circular enclosure which has been identified with *Reilig na Rígh*, the Cemetery of the Kings [of Connacht] ever since the days of Charles O'Conor, one of the eighteenth-century pioneers of Celtic scholarship. But this identification is certainly erroneous; excavation within the area has shewn that the enclosure is not a cemetery at all, but a mere cattle-pen. A short distance away is a mound on the summit of which stands an erect stone long identified with the pillar of Nath-Í, the last pagan king of Ireland, who is recorded to have been here buried.[2] In this case, again, excavation has upset a superficial identification. The mound is not a burial-mound at all, but has been scarped out of a much larger esker. There is no trace of any burial under the pillar, and we must infer that

[1] There is a useful compilation by R. R. Brash, "On ancient stone chairs and stones of inauguration," *Gentleman's Magazine*, 1865 part i pp. 428, 548 (reprinted in "Gentleman's Magazine Library," *Archæology* part ii p. 27). For Magh Adhair see PRIA xx p. 55, JRSAI xxi p. 462. For other inauguration sites see G. E. Hamilton, "Two Ulster inauguration places," JRSAI xlii p. 64: H. F. Hore, "Inauguration of Irish chiefs," UJA I v p. 216, with as an appendix a description with plan and sections of Tullaghog (Tyrone), the inauguration-place of Ui Neill: PRIA xxxiii p. 505 (description of an artificially-modified esker at Masonbrook, near Lochrea, perhaps an inauguration-mound): on this monument see also JGAHS x p. 71: on the "Clandeboye" stone, see Frazer's paper, JRSAI xxviii p. 254, and S. F. Milligan in UJA II iv p. 86.

[2] Figured JRSAI xliv plate facing p. 28.

this, like the so-called Lia Fáil at Tara, was an inauguration-stone.[1]

Emhain Macha, the residence of the kings of the Ulaidh, displays a gigantic mound and another of smaller size, surrounded by a large earthen enclosure.[2]

Uisneach is an enclosure in the form of a figure-of-eight, with a double rampart surrounding it. It is divided into two sections with a central passage between them. Two remarkable stone buildings are contained within the enclosures. As we write the site is undergoing excavation: when this work is finished, a complete monograph upon its history and its remains, at present in preparation, will be published.[3]

Much more extensive remains can be traced upon the Hill of *Temair Breg*, the seat of the High Kings of Ireland from the time when Cormac Mac Airt first laid the foundation of the united monarchy. For long before Cormac's time—probably as far back as the Bronze Age—it was the sacred seat of a priest-king, or, rather, a god-king. The site is a swelling ridge, of no conspicuous height, but commanding one of the most extensive prospects in all Ireland.[4] On its summit is to be seen a series of low earthen mounds. Some of these are in the form of walls, enclosing spaces for the most part circular; others are small rounded hillocks. The recorded and extant remains have been surveyed by the present writer in an essay to which the reader may be referred for full particulars regarding the site and its traditions[5]: a plan of the site as it exists at present will be found in Fig. 10.

Sanctuaries and Assembly-places

We read that on one occasion the hero Find mac Cumhaill was seated on an assembly-mound, and his followers came to him and asked: *Whose grave is this mound?*—whereupon he told them the story to which this is the exordium.[6] This incident presupposes that an assembly-mound is necessarily a burial-tumulus. This is only what we might expect. Much

[1] See (Sir) S. Ferguson, "On ancient cemeteries at Rathcroghan and elsewhere in Ireland, as affecting the question of the site of the cemetery of Tailtin," PRIA xv p. 114: H. T. Knox, "Ruins of Cruachan Ai" (a very full and richly illustrated monograph), JRSAI xliv p. 1.

[2] There is a plan of this site in *Revue Celtique* xvi p. 1, and another in JRHAAI xvi p. 409.

[3] In the meanwhile, reference may be made to Sir S. Ferguson's paper cited above, where a small but excellent plan of the site will be found.

[4] The same words would apply equally well to Uisneach, from the summit of which hills in no less than twenty of the thirty-two counties are visible.

[5] Temair Breg, "A study of the remains and traditions of Tara," PRIA xxxiv (1917-19) p. 231.

[6] Kuno Meyer, *Fianaigecht* (R.I.A. Todd Lecture Series, vol. xvi p. 54).

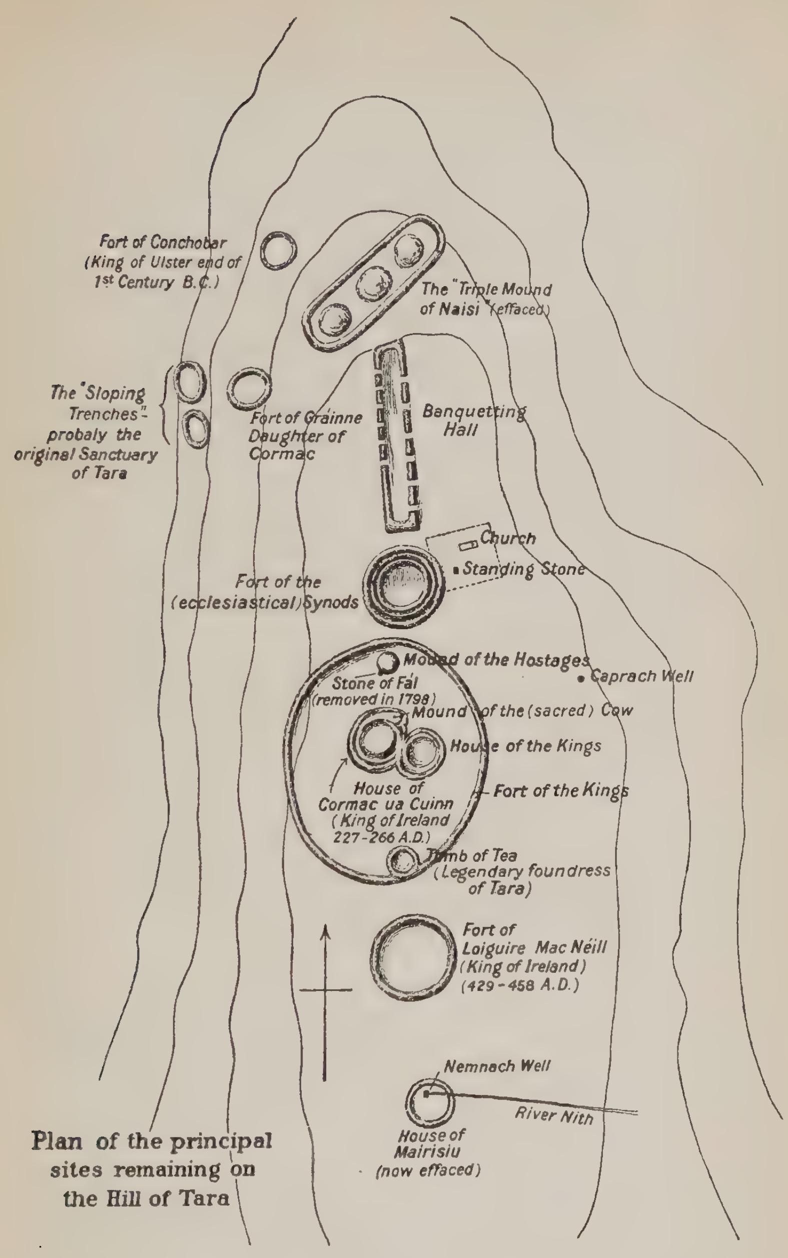

Fort of Conchobar (King of Ulster end of 1st Century B.C.)
The "Triple Mound of Naisi" (effaced)
The "Sloping Trenches" – probaly the original Sanctuary of Tara
Fort of Grainne Daughter of Cormac
Banquetting Hall
Church
Standing Stone
Fort of the (ecclesiastical) Synods
Mound of the Hostages
Caprach Well
Stone of Fal (removed in 1798)
Mound of the (sacred) Cow
House of the Kings
House of Cormac ua Cuinn (King of Ireland 227-266 A.D.)
Fort of the Kings
Tomb of Tea (Legendary foundress of Tara)
Fort of Loiguire Mac Néill (King of Ireland) (429-458 A.D.)
Nemnach Well
River Nith
House of Mairisiu (now effaced)
Plan of the principal sites remaining on the Hill of Tara

FIG. 10.

of early religion is based on the cult of the dead, and the traditional association of the chief centres of assembly with the burial-place of persons of importance may well have a foundation in fact.

This is not the place to enter into the complex subject of the pre-Christian religion or religions of Ireland; but we cannot altogether pass over the sanctuaries where the gods were worshipped. This subject has, as yet, been hardly touched; but we can have no hesitation in accepting the tradition that Temair, Uisneach, the great concentric earthen mounds of *Tlachtgha*, near Athboy (Meath), and the now almost vanished *Tailltiu* (Telltown), in the same county, were not only palace sites, but were important sanctuaries. The imposing mountain-masses of Slievenaman (Tipperary) and Croach Patrick (Mayo), were also, no doubt, mountain-sanctuaries. The modern appellation of the former is a corruption of the name which appears in Irish literature as *Sliab na mban finn*, "Mountain of the White Women". These were unquestionably supernatural beings of some kind. The latter, which in outline much resembles Puy de Dôme, the ancient sacred mountain of Auvergne, has maintained its sanctity under Christian auspices even unto this day.

A remarkable mountain sanctuary is the hill of *Crotta Cliach*, in the Galtees (Limerick). The name means "Harps of Cliu"; Cliu was a supernatural harper, who, according to that wondrous repertory of ancient folk-lore the *Dindshenchus*, used to "play upon two harps at once". The mountain was identified by Mr. Westropp, who observed after a thunderstorm how two triangular hollows on the hill-side were crossed by rivulets which sparkled in the sunshine, and which, against the dark background of the hill-side, bore a remarkable resemblance to the silver strings of two harps.[1]

Lake-dwellings

The custom of erecting dwellings over the surfaces of lakes was followed in various parts of Europe from the Stone Age downward. In Ireland, however, it does not appear until the Iron Age.[2]

[1] T. J. Westropp, "Dun Crot and the 'Harps of Cliu' in the Galtees, Co. Limerick," PRIA xxxv p. 378. Mr. P. J. Flynn, in *The Book of the Galtees and the Golden Vein*, has questioned the identification, but hardly on sufficient grounds. For other sanctuary sites see the same author's "Oenach Cairbre," PRIA xxxv p. 363: "Ancient places of assembly in the counties Limerick and Clare," JRSAI xlix p. 1.

[2] For the general subject of European lake-dwellings, the reader may be referred to Munro's *Lake-dwellings of Europe* (with a very full bibliography), or to the second part of the same author's *Palæolithic Man and Terramara Settlements*

This chronological fact accords perfectly with the historical theory upon which these chapters are founded. The purpose of building lake-dwellings was defence. Now we have seen that in Ireland the Iron Age witnessed the arrival of a new people, comparatively few in numbers, who by the means of their superior weapons, made themselves masters of the country, and reduced the aborigines to vassalage. This made it necessary for the new lords to protect themselves. When a Celtic baron, to adapt the language of feudalism, found in his estate a lake containing an island, on which he could sleep in peace untroubled by fears of his vassals, he established himself thereupon. When there was no island, he made one.

A date earlier than the Iron Age has been claimed for certain of the lake-dwellings, on account of the discovery of objects of flint or of bronze upon their sites, as well as moulds for casting bronze-age objects. But in all such cases iron-age objects have also been found on the site ; and it is always the latest object in a hoard which dates the whole. Flint, we know, continued to be used till quite a late date in Ireland for common purposes, so that it is not surprising to find flint tools even in an iron-age site ; and the bronze-age objects are to be explained as accidental strays, which happened to be in the soil carried over for the construction of the island, and deposited unconsciously by the builders like ordinary stones. At every site the great majority of the objects belong to the Iron Age, and, moreover, to a late date therein. In any case the casting of bronze ornaments continued through the Iron Age and the Christian Period.

The process of building a lake-dwelling in Ireland varied, according to the nature of the lake and of its bottom. If the bottom was hard and stony, an area was marked out by means of a circle of stakes, driven into the lake-bottom ; this was filled in with material, ferried over from the shore, and piled up until it rose above the surface of the water. If the bottom was soft and peaty, as was likely to be the case, a raft of tree-trunks or wicker-work and brushwood was constructed and set floating on the lake-surface. Upon this raft the earth and stones was piled up. The weight of the accumulation of material sunk the raft to the bottom of the lake, where it made a footing for the artificial island, preventing its material from

in Europe, as well as to Keller's standard work on the *Lake-dwellings of Switzerland*. In studying the Irish remains he should read Wood-Martin's useful compilation, called, with needless tautology, *The Lake-dwellings of Ireland*, *or*, *Ancient Lacustrine Habitations of Erin* (Dublin and London 1886), along with which should be studied Munro's *Ancient Scottish Lake-dwellings* (Edinburgh 1882). Reference may also be made to R. Munro, "The structural features of lake-dwellings," JRSAI xxiv pp. 105, 209.

sinking into the soft mud or peat.[1] When the island was thus constructed, a palisade was set up surrounding it, the necessary houses and other enclosures were built upon it, and the dwelling was complete. In Ireland this class of habitation is usually known by the name *crannóg*, a diminutive of the word *crann*, "a tree".[2]

The island was sometimes surrounded by deep water, in which case the only means of access was by rowing or by swimming. When the water was sufficiently shallow, a gangway was sometimes provided, connecting the island with the mainland; this passage is now usually represented by the stumps of the piles which supported it. Probably in most cases the gangway offered nothing but a passage that could be waded, being always covered with water. It is said that the passage was not invariably straight, but that it sometimes ran in a zigzag course, to baffle unwelcome strangers. Those who had the right of access to the island knew by long practice the way along these submerged gangways, whereas the visitor who had no legitimate business on the island would miss his footing at the bend in the road, and would step unexpectedly into deep water. But the simpler explanation is probably to be preferred, that the line of the gangway was determined by the shallow bank upon which it was built.[3]

A stockade protected the enclosure, for which sometimes a wall of stones was substituted.[4]

Sometimes the causeway was paved with stone slabs,[5] and occasionally it extended beyond the shore of the lake, carrying a road through soft bog surrounding it.

Although the practice of erecting lake-dwellings began in Ireland with the Iron Age, it did not end with the period to which this name is usually confined. Indeed, most of those that have been excavated belong to the time when Christianity had been well established in the country; and there are records of some of them having been inhabited or fortified down to the end of the sixteenth century. Many of the objects that have been found in these sites are of a quite late date.

[1] For admirable photographs of the wicker-work basis of such an island see various plates in Gray and Bulleid, *The Glastonbury Lake Village*, vol. i (Glastonbury 1911).

[2] G. H. Kinahan, "On the exploration of crannogs," JRHAAI xi p. 459.

[3] This statement about the changing direction of the gangways is given on the authority of Wood-Martin, *Lake-dwellings* p. 44. He quotes no examples, however, and I have been unable to trace any in the descriptions of the dwellings which he has compiled, or which are to be found elsewhere.

[4] For an example see E. L. Layard, "Fortified stone lake-dwellings on islands in Lough Skannive, Connemara," JRSAI xxvii p. 373, and *Idem*, "On a fortified stone lake-dwelling on an island in Lough Cullen, Co. Mayo," JRSAI xxix p. 32. The islands described in these papers are natural, not artificial.

[5] As at Loch Tarmin (Antrim): Wood-Martin, pp. 165, 166.

The first Irish lake-dwelling brought to scientific notice in Ireland was that dug in the year 1839 at Lagore, near Dunshauchlin (Meath). A local peddler from the latter place was in the habit of bringing to Petrie antiquities for sale, which, he said, he had procured in a peat-bog near the village. Petrie and Wilde determined to visit the spot, and in a drained lake they found an artificial mound entirely overgrown with peat, which the turf-cutters had partially removed. On making further enquiries, they learned that the site had been well known as a source of supply for bones, of which already about 150 cartloads had been dug out and sent to Scotland for manure. Petrie and Wilde made arrangements to publish the discoveries, the former describing the antiquities and the latter the bones. But owing, as it would appear, to some quarrel, the publication never appeared: nothing was put on record except an abstract of Wilde's part of the work. The antiquities acquired by Petrie are preserved in the Royal Irish Academy's collection. Subsequently Wakeman had a chance of seeing further excavations on the site, and he wrote a brief account of them; this is all the record which we have of the excavation of an ancient site of great importance. The mound seems to have been circular; the circumference, which was 520 feet in length, was formed with upright posts of oak, 6 to 8 feet in length, morticed into horizontal beams of the same wood, and laid flat on the marl and sand beneath the bog, nearly 16 feet below the modern surface. The upright posts were held together with connecting cross-beams, fastened with large iron nails. The space thus enclosed was divided into separate compartments; but no plan of this division was preserved. They were formed of oak beams joined together with great accuracy, in some cases with their sides grooved in order to allow of plank panels being driven down between them. The interiors of three of these chambers were filled with the bones of animals, including several varieties of oxen, the pig (a smaller form than that now bred in the country), the horse, the four-horned sheep, wolf-dog, fox, and deer. The ass is also mentioned, but more probably the bones thus described belonged to a small horse: all the evidence points to the ass being unknown in Ireland before the English occupation.[1]

Iron swords of the straight La Tène type were found in the settlement, as well as knives, spear-heads, javelins, and dagger-blades of the same metal; no weapons of bronze came to light. Most interesting of all the finds were fragments of bone covered

[1] J. P. Mahaffy, "On the introduction of the ass as a beast of burden into Ireland," PRIA xxxiii p. 530.

with carved devices of a late La Tène or early Christian style, shewing that a metal-worker had been living on the site, and had used these bones as materials on which to design his ornamental patterns.

The settlement was historically important, and had had its share of troubles. It was the stronghold of the chieftains of Ui Maeil-Shechlainn, and it was sacked in the year A.D. 848 by Cinaed, son of Conaing, lord of Ciannachta Breg—a sept that had its headquarters on the plain on which Tara stands. These facts, recorded in the *Annals of the Four Masters*, shew that the site was occupied till almost within a thousand years ago.[1]

The most perfectly preserved dwelling-house of the lake-dwelling type that has come to light in Ireland is a wooden hut found in the bog of Drumkelin (Donegal).[2] It was surrounded with a staked enclosure, in which the gate-opening could be traced. The floor of the house rested on a layer of branches covered with fine sea-sand; a paved causeway of logs and of hazel-branches led from the open side of the house to a fireplace outside, around which were ashes and charred wood. The building itself was 12 feet long and 9 feet high, and was formed of rough logs and planks of oak. One side of the hut was entirely open. The framework was composed of logs; the horizontal sleepers at the base were made from the trunk of a large tree, split in two, and placed with the flat surface downward; the uprights were morticed into these sleepers. The inside of the house was divided into two storeys, each about 4 feet high; it follows that the "house" can have been little more than a sleeping-shed, the two compartments resembling, and being used like, the berths of a steamer. A flint arrow-head, part of a wooden sword, and a fragment of a leather shoe, were found in and about the house. These, however, did not indicate, as some have supposed, that the house was as old as the Stone Age; it shewed either that it belonged to people too poor to afford metal, or more probably, that when the dwelling was abandoned its owners carried away with them every scrap of metal which they possessed, leaving only the worthless rubbish. A family leaving a house even yet will carry away with them all their belongings, leaving behind old shoes and broken knives and crockery. The total absence of broken potsherds around the site of this house is very noteworthy.

[1] For Wilde's contribution see PRIA i p. 420, vii pp. 192, 211: for Wakeman's, JRSAI vol. xv p. 325. See also numerous references in Wood-Martin's *Lake-dwellings*. The subject is passed over in complete silence in Stokes's *Life of Petrie*.

[2] An illustration will be found in Wood-Martin, *Pagan Ireland* p. 223. There is a model in the National Museum.

A similar framed house was found in Timahoe (Leix); but only a vague description of it is on record (JKAS ii p. 207). It is interesting to note that on the floor of this dwelling there was found an oak beam, with a wedge inserted into one end, and a mallet, made of a single piece of wood—a section of the branch of an oak-tree forming the head, and a subsidiary branch springing from it acting as the handle. The construction appears, therefore, to have been incomplete when it was abandoned.

Remains of similar structures have been found in Ballydooloch, near Enniskillen (Fermanach). Fragments of iron-age pottery were strewn about, and with them were an iron fibula and an iron knife. There was also a band of bronze, supposed to have been intended to secure the staves of a wooden vessel, and a stone with cuts upon it which it was possible to read as the Ogham letters BALHU. I do not believe, however, that these were genuine Ogham characters.[1]

The important site of Ardacullen (Roscommon) was, unfortunately, ransacked by private collectors before it was properly examined, so that several objects, some of them of great interest, were dispersed and lost. Happily the remarkable bronze brooch described above (p. 155) was rescued for the Royal Irish Academy, as well as some other objects. The most suggestive find was a neck-shackle of iron, with 20 feet of iron chain attached to it, associated with which was the skull of a young man, which displayed the marks of no less than twenty sword-cuts. None of these was sufficient individually to cause immediate death, but they indicate that the unfortunate victim had been chained up by his enemies and hacked to pieces. The story of how king Niall of the Nine Hostages chained his enemy Eochaid king of Leinster to the holed stone called *Cloch an Phuill*, still to be seen in the neighbourhood of Tullow (Carlow), with the intention of having him shot to death by archers, is recalled by this gruesome discovery.[2]

We have already spoken of the Lisnacrochera site. Another Antrim crannog, that of Moylarg, had a better fate; its excavation was well described by Dr. Buick,[3] and its chief contents ultimately found their way to the National collection. We may mention a flint arrow-head and some flint chips, perhaps scrapers. The first may have been made and used by the crannog-builders, on the principle that has already been laid

[1] Illustrations of this and of many other lake-dwelling sites will be found in Wood-Martin, *op. cit.* See also W. F. Wakeman, "On certain recent discoveries of ancient crannog structures, chiefly in the Co. Fermanagh," JRHAAI xv p. 324, for remains of other framed structures.

[2] Keating's *History* (I.T.S. edition) vol. ii p. 406.

[3] JRSAI xxiii 27, xxiv 315.

down, that weapons intended to be shot away and probably lost were manufactured of the less valuable materials; but the other flints need not have been directly connected with the crannog, as they may have been accidentally contained in the soil transported for its construction. Other finds were a small leaden cross, of a type current in the ninth and tenth centuries; a number of glass beads; a pin, of a type very common in late lake-dwellings; and a small ring. There were also a number of specimens of a type of object very common in Ireland, to which the name "tracked stone" is given. These are small, smooth, flattened pebbles, water-worn, with a straight groove crossing one side. The exact purpose of these objects is uncertain; they have been taken for sharpening stones and for strike-a-lights, but it is not demonstrated that they would actually serve either purpose.[1] Genuine bones or sharpening stones are common in all crannogs.

Two other objects from this lake-dwelling call for special notice. The first is a bronze strainer—a flat-bottomed saucer with a horizontal projecting handle, like a small frying-pan, 8½ inches in total length. When we make kitchen strainers we are content to punch holes in them at random; when our fore-runners made them, they arranged the holes to form a pleasing pattern. The pattern thus traced is extremely interesting, for though the general character of the finds in this crannog is late, there is no difficulty in recognizing La Tène reminiscences in the design.[2]

The second of the two objects specially mentioned is a portion of a primitive but ingenious padlock. This was in two parts: the tube-and-hook, and the spring catch. The spring catch had at one end an eye that fitted on to the point of the hook; at the other end two spring appendages which were pressed into the tube and caught on projections inside it. (The two parts of the padlock, as well as the key, are shewn in Fig. 11 *a*). The spring catch could not be withdrawn until these appendages were pressed together and released by means of a key, thrust through a square hole at the end of the tube. Padlocks of this type are not ancient; they were in use in the fifteenth century, and the presence of one of them on a lake-dwelling is evidence that it continued till late in occupation. Other evidence to the same effect comes from lake-dwellings near Carrickmacross,[3] which yielded coins of Queen Mary, as well as pendant ornament not satisfactorily described, but said

[1] For illustrations of tracked stones see Wilde, *Catalogue* p. 75: Wood-Martin, *Pagan Ireland* p. 400, and Fig. 11 *h*.
[2] It is illustrated by Dr. Buick in the paper referred to.
[3] JKAS vii p. 379.



FIG. 11.—Objects from lake-dwelling sites.

on good authority to be of the fourteenth or fifteenth century. At Monea (Fermanach), a fragment of a mediæval helmet of the type called *bascinet* was found.[1]

[1] JRHAAI xii p. 319.

The following table, adapted from a map constructed by Col. Wood-Martin, will give some idea of the number and the distribution of these structures in Ireland. It is not complete, for a few unknown to Wood-Martin have come to light since the publication of his work. Thus, Clare has certainly more examples than one.[1] Co. Cork is credited with no examples, but Rev. Professor Power has described the site of one inside Cork city: [2] and Mr. J. P. Conlon, of University College, Cork, has called my attention to another in the lake of Inchigeelach,[3] and Sir Thomas Esmond has described a crannog site in Wexford.[4] The general proportion of the numbers is, however, of more importance than the actual numbers, and this is but little influenced by recent discoveries.

Fermanach	39	Donegal	6	Louth	3	Carlow	0
Leitrim	24	Tyrone	6	Meath	3	Cork	0
Cavan	21	Down	5	Tipperary	3	Dublin	0
Antrim	20	Westmeath	5	Offaly	2	Kerry	0
Galway	19	Limerick	4	Longford	2	Kildare	0
Monachan	19	Leix	4	Clare	1	Kilkenny	0
Roscommon	14	Armagh	3	Mayo	1	Wexford	0
Sligo	13	Derry	3	Waterford	1	Wicklow	0
				Total	221		

It is possible to exaggerate the importance of the numbers in such a list as this. They depend on a number of accidental factors, quite as much as upon ethnological influences, for which alone they would have any special value or significance. Such circumstances are the number of available and suitable lakes, as well as the number of diligent and competent observers. Fermanach and Antrim have been very thoroughly explored, the former by the enthusiastic Wakeman, the latter by a number of collectors, each seeking to make his cabinet excel that of his rivals: while, on the other hand, some counties may be bare in record for want of workers.

A passing mention should be made, to correct a misapprehension, of a lake-dwelling found many years ago under the sea at Ardmore (Waterford). This was not really a "marine crannog" as some have supposed, like the dwellings of the Cauci described by Pliny.[5] It was a lacustrine structure; an inroad of the sea has here absorbed an ancient inland lake, on which the dwelling had originally been built.[6]

[1] See JRSAI xxxi 433, xxxv 391.

[2] JRSAI l p. 179.

[3] JCHAS ii p. 78.

[4] "Notes on crannog and other finds in north Co. Wexford," JRSAI xxix p. 404.

[5] *Natural History* xvi *ad. init.*

[6] See a letter on the subject by Mr. R. J. Ussher in JRHAAI xv p. 154, and a later account by the same writer, JRSAI xxxiii p. 387.

In the beginning of the history of lake-dwellings in Ireland they were the strongholds of the Celtic lords, who from these water-fastnesses ruled their vassals. When the curtain falls upon them, they are the last refuges of Irish chieftains, in their hopeless struggles against the armies of Tudors or of Stuarts.

The Contents of Lake-dwellings

The fullest information as to the ordinary domestic utensils and the household culture of Ireland has been recovered from the lake-dwellings. The fact that many of them have become involved in peat-bogs has been of importance, as the preservative properties of peat has secured the conservation of objects in wood, which would have perished beyond recovery in other circumstances.

Canoes.—The introduction of lake-dwellings involved the introduction of dug-out canoes on the Irish lakes. There is no clear evidence that any of the numerous existing examples of this class of boat in Ireland is older than the Iron Age ; and it has been asserted that they are so closely associated with lake-dwellings that the finding of such a canoe in a bog is a sure sign that a lake-dwelling will be found not far off.

There are three kinds of dug-out canoe found in Ireland. The first is of a large size, pointed at one end or at both, sometimes with a hole, meant, apparently, for stepping a mast, and measuring up to 40, or even 60, feet in length ; the second, which is the commonest, of moderate size, round or flat-bottomed, pointed or rounded at the ends, about 20 feet long and 2 feet broad : the third, a small portable kind, 8 to 12 feet in length, with handles at the ends whereby it could be carried from lake to lake. A canoe of this nature has been described and illustrated by Mr. Wakeman,[1] who supposed that a "groove," the nature of which is far from clear in the description and the accompanying drawing was, in some undefined way, connected with a device for securing buoyancy by means of a watertight compartment at the end of the vessel. We need not trouble to demonstrate the improbability of any such theory, though we have hardly sufficient basis on which to found a substitute.

Sometimes the canoe consisted simply of a half tree-trunk, with the hollow scooped out, it may be by means of adzes, it may be with the aid of heated stones. Sometimes uncut blocks were left in the hollow, apparently for seats. The oars seem to have been usually manipulated after the fashion of

[1] In JRHAAI xii p. 16.

modern canoe-paddles, as there are no means of securing rowlocks of any kind to the gunwale of the boat.[1]

The finest specimen of a dug-out canoe as yet found in Ireland was unearthed in a bog on the townland of Lurgan, parish of Addergoole (Galway). It is now to be seen in the National Museum; it is no less than 50 feet in length.[2]

Another ancient dug-out canoe was found in Loch Erne in a curious way. One of the lake steamers happened to ground on a shallow, and her bow pushed the canoe out of its hiding place in the mud. The canoe thus disclosed was itself curious, for nine holes had been drilled through its keel. It seems as though some delinquent had been punished by being set adrift in a leaky boat.

Dug-out canoes are not necessarily of high antiquity. There is a drawing in the Pepysian Library in Magdalene College, Cambridge, made by a well-known naval engineer of the latter half of the seventeenth century, Capt. Thomas Phillips, and professing to be drawn from life, representing a large, sea-going currach, lug-rigged, towing a dug-out dinghy. This is evidence that they were in use down to about 1680.[3]

Wooden Vessels.—A number of wooden vessels of various shapes and sizes have been found from time to time in peat-bogs, or in the sites of crannogs. It is not necessary to suppose that these are of any high antiquity; in fact one, now in the Royal Irish Academy, containing a lump of "bog butter,"[4] bears scratched upon it a date in the eighteenth century. On the other hand, Mr. de Vismes Kane has described a wooden bowl on five supports found at a depth of 15 feet beneath the surface of a bog:[5] and another, described by Wakeman, from a bog at Cavancarrach (Fermanach),[6] had a simple guilloche pattern cut upon it which, while not necessarily very ancient, does not look so modern. All these vessels, of which there is a considerable variety in shape, are hollowed out of single blocks

[1] For an example of a canoe-paddle see Wilde, *Catalogue* p. 204.

[2] T. B. Costello, "The Lurgan canoe," JGAHS ii p. 57.

[3] Reproduced JRSAI lvi, facing p. 119. There are many papers on dug-out canoes: reference may be made to Wilde, *Catalogue* p. 203: a note by R. Day, *Proc. Soc. Antiqu. Lond.*, Series II vol. xii p. 65: J. C. Wallace, "A find of oak dug-outs," JRSAI xlvii p. 85: also PRIA ix p. 210: JRSAI xxv p. 224.

[4] Bog butter is one of the commonest "finds" in Irish bogs. The practice of sinking butter in bog-holes was well known in the seventeenth century, and is referred to by the traveller Dineley, who visited Ireland about 1681 (see JKAS iv p. 186). It was associated with "a sort of garlick, and buried for some time in a bog, to make a provision of an high taste for Lent". For further details see PRIA vi p. 369: UJA II v p. 112: JRSAI xxi p. 583, xxii p. 356, where analogies from such remote lands as Iceland and India are quoted. The taste of bog butter is said to resemble cheese, and it was probably to acquire this taste, as well as for preservative purposes, that the butter was thus treated.

[5] PRIA xv p. 2.

[6] JRHAAI xv p. 98.

of wood, not built up (like a modern barrel or tub) of staves. A primitive churn, made in this way, has also been described.[1] Among other wooden objects of domestic use, but of very uncertain date, may be mentioned cattle-yokes, flat dishes, stools, spades, hay-forks, canoe-paddles, etc., all formed in the same way, out of single pieces of timber.[2] An entirely enigmatical object, in the shape of a cone on a stem—like a colossal wine-glass in outline, but solid, and with a solid handle at one side—was found in a bog near Killeshandra (Cavan).[3]

Querns.—Quern-stones, for grinding corn, are not infrequently found in the lake-dwellings. The oldest form of quern, which may go back to the Bronze Age, is the saddle-quern, so called from the shape of the lower stone. It is a long rectangular slab of rough stone, upon which the upper stone, a smaller block with a flat base, is rubbed backward and forward. Specimens of this kind of mill are well known in Ireland, though not particularly common.[4] But in the lake-dwellings the rotary quern, as it continued in use to within living memory in the West of Ireland, is the normal form of mill.[5] It consists of two stones about 1 foot 10 inches in diameter; the lower stone convex on the upper surface, with a hole in the middle for a pivot: the upper stone concave on the lower surface, with a hole through the middle for permitting the pivot to pass through, and another hole near one side of the upper surface, for receiving a wooden stake to serve as a handle. Often the sides in contact are plane, not concave-convex. The upper surface of the upper stone is frequently decorated with a cross in relief.[6] This may refer to the semi-sacredness of bread; it may also have the half-magical purpose of lightening the labour of grinding, which was proverbially among the heaviest of the domestic duties. A quern-stone was adapted as a memorial tombstone of one Sechnasach at Clonmacnois; the stone is now in the Royal Irish Academy's collection.

According to a tradition reported in the compilation called *Dindshenchas*, water-mills were first introduced into Ireland by the third-century king Cormac mac Airt; who, having become enamoured of one of his slaves, sought thus to relieve her of the heavy work of grinding with a hand-mill for the domestic

[1] JRSAI xxi p. 588.
[2] Illustrations of a considerable number of such objects will be found in Wilde's *Catalogue* p. 206 ff. and Wood-Martin's *Lake-dwellings*. A rude wooden spade is figured in JCHAS Series II vol. xiii p. 118. See also UJA II viii p. 25.
[3] Illustrated in JRSAI lv p. 136.
[4] A specimen from Youghal is described, JKAS iv p. 36. The type is illustrated in Wilde, *Catalogue* p. 104; Fig. 14 (*b*).
[5] See H. S. Crawford, "Some types of quern, or hand-mill," JRSAI xxxix p. 393: also PRIA i p. 390.
[6] See for an illustration, Wilde, *Catalogue* p. 107.

establishment of Tara,[1] at a time when she was in a physical condition that unfitted her for it. It was one of the privileges of especially favoured saints that when their turn came to do this work in their monasteries, angels came down from heaven to relieve them of this burden.[2] The Cormac story need not be dismissed as unhistorical; water-mills seem to have been used in Ireland in early mediæval times. A form with a horizontal wheel on a vertical axis, having turbine paddle-boards, survived down to quite modern times in Ireland.[3]

Otter (or Deer) Traps.—In various places in Ireland there have been found specimens of the well-known valved shuttle-shaped wooden traps, such as have also been found in Laibach Moor (Carniola), in Italy, and in Germany.[4] These objects differ among themselves in some details, but the essential features are common to all—a shuttle-shaped beam of wood, about 3 feet in length, with a rectangular hole cut through the middle, rebated for receiving a closing door of one or two valves. There is also provision for securing a spring by which the "door" can be kept tightly secured (Fig. 11 *c*). The principle on which the trap seems to have worked was as follows: It was set with the "door" wedged open, and bait was placed in such a position that the animal, in seizing upon it, dislodged the wedge. The "door," thus released, would close on the unhappy creature's snout, or paw, as the case might be. It is also possible that the trap was set without bait, in a position where the animal might be expected to tread; in Larkhill Bog (Fermanach) a series of nine such traps was found, laid in a regular order.[5] On the shaft of a cross from Banagher (Offaly), now at Clonmacnois, there is a representation of a deer caught in such a trap[6] (Fig. 11 *d*).

Whetstones are among the commonest finds in iron-age sites, especially in crannogs. They are narrow bars of quartz-

[1] *The Metrical Dindshenchas*, ed. Gwynn part i pp. 20-23.

[2] See R. A. S. Macalister, *The Latin and Irish Lives of Ciaran* pp. 21, 120.

[3] This form of mill is studied with examples from Ireland and elsewhere in Europe in J. P. O'Reilly, "Some further notes on ancient horizontal water-mills," PRIA xxiv p. 55. See also H. T. Knox, "Notes on gig-mills and drying kilns near Ballyhaunis, Co. Mayo," PRIA xxvi p. 265. O'Reilly's paper is in the form of a continuation of an article by R. MacAdam on "Ancient water-mills" in UJA I iv p. 6.

[4] See the monograph on these objects which forms chap. vi of R. Munro, *Prehistoric Problems* (Edinburgh and London 1897), and gives a bibliography to the date of publication. See the same writer's "Some further notes on otter and beaver traps," JRSAI xxviii p. 245.

[5] H. Allingham, "Wooden objects found in peat-bogs supposed to have been otter-traps," JRSAI xxvi p. 379.

[6] For an illustration of the entire cross-shaft, from a rubbing, see *Proceedings Soc. Antiqu. Scot.* xxxi (1896-7) p. 310. For the history of the monument itself see T. L. Cooke, "The Ancient Cross of Banagher, King's Co.," JKAS ii p. 277.

ite or other stones, from 3 to 5 inches in length, usually square or rectangular in section (Fig. 11 *e*). Oval sections are also known. As a rule they are perforated at one end for suspension. It may be that these stones were used for other purposes as well as polishing stones, or as touchstones for testing metals.[1] At Loch-pairc crannog, near Tuam, beside a number of whetstones of normal size, one no less than 17½ inches long was found.[2] One of the others had a bronze ring remaining in the perforation ; this may have been a touchstone. A unique example from Church Island, Loch Currane (Kerry), with a human head at the upper end, is figured in *The Antiquaries' Journal* vii p. 324.

Lamps of stone have been found in various sites. Essentially these are shaped either like saucers or egg-cups, not very artistically cut out of blocks of moderately hard stone. The saucer-shaped vessels may be about 6 inches in diameter, and 3 inches high. The egg-cup vessels have a cylindrical stem about 6 inches in diameter and about 10 inches long, and a bowl-shaped expansion at the top. There may or may not be an expanding foot at the lower end (Fig. 11 *e*). Rarely is there any carved ornament upon the side of the vessel, though two saucer-shaped vessels with simple linear ornament on the sides are figured by Mr. Knowles,[3] and an " egg-cup " from Humphreystown (Wicklow) has horizontal mouldings on the cup and the base, and a screw or rope pattern covering the stem.[4] Wilde and others of the earlier writers supposed that these objects were chalices, which is inadmissible for both practical and liturgiological reasons ; they are too heavy and clumsy, and stone is a forbidden material for the sacred vessels. Mr. Coffey suggested to Rev. P. Power that they may have been lamps,[5] and the latter tentatively adopted this interpretation, especially after one such cup was found with soot-stains in New Hall Cave by Mr. R. J. Ussher.[6] The subject was afterwards examined by Mr. Armstrong,[7] and finally settled by a chemical examination, which clearly revealed traces of the fatty grease that had been used as an illuminant.[8]

[1] See W. J. Knowles, " Recently discovered finds in the Co. Antrim," JRSAI xxii p. 46 : Wilde, *Catalogue* p. 87 : Wood-Martin, *Lake-dwellings* p. 69.

[2] Macalister, Armstrong, and Praeger, " The excavation of Lochpairc crannog, near Tuam," PRIA xxxii p. 147. See especially p. 150 and plate xvii.

[3] " Recently discovered finds in the Co. Antrim," JRSAI xxii p. 46.

[4] Wilde, *Catalogue* p. 132.

[5] Rev. P. Power, " On four or five ' stone chalices ' from early church sites in the Decies," JWAS (1906) p. 143.

[6] TRIA xxxii Section B p. 72.

[7] E. C. R. Armstrong, " Stone chalices, so-called," PRIA xxvi p. 318.

[8] R. J. Moss, " Chemical notes on a stone lamp from Ballybetagh and other similar stone vessels in the Royal Irish Academy collection," PRIA xxviii p. 162.

While these lamps are of a primitive type, it does not necessarily follow that they are of very remote date. Mr. Moss's examination revealed the presence of a relatively considerable quantity of sulphur, which he attributed to the use of sulphur matches.

A fragment of a fine lamp of stone was found in a cave near Cappagh (Waterford), and is now in the Royal Irish Academy's collection. It is in the shape of a bowl, about 1 foot in diameter and 6 inches deep. There were three loop handles on the sides, by which it could be suspended; that this was intended is shewn by the fact that the under side has an interlacing ornament carved upon it, which would not be seen if the bowl were merely placed upon a table. A small cross, cut upon the edge of the bowl, shews that this was an object of ecclesiastical furniture (Fig. 11 *g*).

Other evidences of the varied life of the inhabitants of Ireland during the crannog period must be enumerated more briefly. The *chase* in its varied aspects is illustrated by the tusks of the wild boar, some of them of considerable size, which are found scattered through the soil of every such site; and by the fish-hooks and iron eel-spears with numerous prongs. The *domestication of animals* is illustrated by the bones of all kinds of cattle, the relics of feasts. The *cultivation of cereals* by the querns, just described. The *preparation and disposal of food* leave traces in the trivets and pots of bronze and of iron, in the knives and forks of metal or of bone, and in the bone apple-scoops. *Dress* also leaves tangible traces. It is not certain to what date are to be assigned the remains of human beings, fully clothed, who have sometimes been found drowned and mummified in the bogs: probably they are rather later than the crannog period, though their dress shews evidence of the persistence of earlier traditions (see the following section). Besides these garments, we have shears (resembling miniature sheep-clippers); pins of many patterns, in iron, bronze, and bone; beads of glass and of stone; and combs of bone. The *handicrafts* are illustrated by the spindle-whorls [1] and loom-weights of the weaver, the crucibles of the metal-caster, the iron tools of the carpenter—hardly distinguishable from their modern representatives in many cases [2]—the knives and the whetstones. The work of the *potter* is conspicuous.

[1] Wilde, *Catalogue* p. 274.

[2] A very few iron tools have been found here and there which are strangely reminiscent of bronze-age types. In a paper of a rather speculative kind, "On the antiquity of iron as used in the manufacture of implements in Ireland" (JRSAI xxviii p. 237), Mr. Wakeman figures a flat and a socketed axe-head, as well as a socketed gouge and chisel, and one or two other objects which may be referred to as illustrations of this note.

Æsthetics cannot be said to be very prominent in sites of this kind. We miss even the lumps of ochre which the bronze-age shore-dwellers used for paint, and which have been found at Whitepark Bay. On the other hand, some very ornamental bronze brooches have been found in certain crannogs, and a sense of ornament is also displayed by the numerous inlaying slips of bone, adorned with simple engraved decoration, which were intended for embellishing objects made of wood.[1] Similar decorations are found on the bone combs, which are the chief toilet instruments. They are decorated with simple patterns upon the sides, and have either a single or a double row of teeth.[2]

Literature and *Religion* are not conspicuous. There are no inscribed objects—for the so-called Ogham from Ballydooloch cannot be counted as such—and little pendant metal crosses are almost the only evidences of Christianity in the sites. Of definite relics of paganism there are none at all. *Warfare*, on the other hand, is well provided for, by swords and spears of iron and even daggers of wood.[3]

Dress

The evidence of the High Crosses, which are decorated with figure subjects attired in the costume with which the sculptors themselves were familiar, aided by literary indications, shews that the normal garments worn by both sexes were a *lene*, a tight-fitting linen garment worn next to the person, and a *brat* or cloak thrown over it. To the back of the *brat* was secured a *cochall* or hood, which could be thrown over the head in inclement weather: otherwise the only protection for the head was the natural hair, which was allowed to grow thick and bushy or flowing. On active work the *lene* was girt up, to give play to the lower limbs; or a garment resembling a kilt may have been substituted. On the feet were worn shoes of leather, not unlike Indian moccasins in appearance. The *bróga úr-leathair* (which tourists have agreed to call "pampooties," imagining that to be the local name) worn by the natives of the Aran Islands, are modern representatives of the ancient shoes, though they cannot compete with these in the cleverness of their stitching, or in the variety of the incised ornament with

[1] Illustrations in Wilde, *Catalogue* p. 342. See also Fig. 14 *f*.

[2] See illustrations in Wood-Martin, *Pagan Ireland* p. 535: Wilde, *Catalogue* pp. 271-2; Fig. 11 *f*.

[3] A wooden dagger found in a bog at Ballykilmurry (Wicklow) is figured by Wilde (*Catalogue* p. 452). It may have been (as Wilde suggests) a model upon which moulds for casting bronze daggers were formed. But nothing in bronze precisely like this object has been found in Ireland. A dagger of bone, found in the bed of the Boyne near Clonard (Kildare) is also figured by Wilde (*Catalogue* p. 258).

which the ancient shoes are decorated.[1] The Royal Irish Academy possesses a *bronze* shoe of the same shape. This was found with about two dozen pairs of the same kind, near an old heap of stones close by the Giant's Causeway. All but two of them were melted down by a local brazier who bought them for their metal. Two small vessels—to judge from the description not very ancient—were associated with them.[2] These shoes cannot have been intended for wear; the sheets of bronze are merely soldered together with lead, and would tear apart immediately with any motion of the foot. The number found together precludes the possibility that they are shrines, intended to preserve a shoe worn by some saint. Most probably they are moulds, upon which a shoemaker fashioned in leather shoes of different sizes. There is a comparatively late shoe-shaped reliquary of bronze, known as "St Brigid's Shoe," in the Academy's collection, which has been described and figured by Mr. Armstrong.[3] Another pair of leather shoes is singular in that the two shoes are fastened together with thongs, so that the wearer could not walk. I cannot improve on Wilde's suggestion that these shoes were used in some inauguration rite.[4]

In the regulations of fosterage, as set forth in the great law-tract called *Senchus Mór*,[5] very strict directions are given regarding the provision of clothes by a foster-parent for his charge, and also for the keeping of those clothes clean and seemly. From other passages in ancient Irish literature, especially those parts of the romantic literature which relate to the boyhood of Cu-Chulaind, we learn that in his time one of the amusements of boisterous youth was a sort of rough-and-tumble in which the combatants endeavoured to tear the clothes from each others' backs—the winner being he who, at the end of the *melée*, had any clothes at all.[6] No doubt this was a very reprehensible and improper form of sport, but at least it is valuable as evidence that little boys normally wore clothes. If little boys wore clothes, we may infer *a fortiori* that every one else wore clothes; and as a fact, the occasional "nudes" whom we encounter in ancient Irish literature are usually either scurrilous persons or madmen.[7]

[1] See examples figured by Wilde, *Catalogue* p. 280. See also W. J. Knowles, "Leather finds in peat bogs," UJA II vol. v p. 63.

[2] See PRIA v p. 27.

[3] *Antiquaries' Journal* ii p. 264.

[4] Wilde, *Catalogue* p. 287.

[5] *Ancient Laws of Ireland* vol. ii p. 146 ff.

[6] *Táin Bó Cúalnge*, ed. Zimmer p. 121: tr. Dunn, p. 55.

[7] There are a few cases not to be so classified, which could be collected if it were worth while; they are always recognized as exceptional, and requiring a special explanation. Either the person has been bathing, or is a suppliant for

This matter is not so much beneath the notice of a history of civilization in Ireland as the reader who comes fresh to the subject would naturally suppose. What would be thought of a future historian who should base his estimate of the civilization of the country which produced Sebastian Bach, Goethe, Immanuel Kant, Mommsen—the names are mentioned at random, as they occur to the mind—upon the egregious "corpse-factory" story, circulated during the war of 1914-18? Yet estimates of the civilization of the country which produced the Great Unknowns who made the Ardagh chalice and the Gospels of Kells are quite seriously based on the utterances of Fynes Moryson, secretary to the lord-deputy of Ireland during O'Neill's rebellion. Moryson thoroughly enjoyed himself in providing pabulum for those who were interested in believing that Ireland itself was a desirable country, but that its inhabitants were savages whom it was good to transfer, if possible, to another world. He tells his patrons, for example, that "an Italian friar"—name unknown, and hardly an ornament to his order—wrote a rhyme about the city of Armagh, which he (Moryson) gives himself the pleasure of presenting to his readers.[1] Obviously this piece of vulgarity is no more worthy of a second thought than the literature chalked by loafers upon blank walls; yet because this "friar," in a dyspeptic moment, spoke of the *carnes crudæ, mulieres nudæ* of Armagh, some moderns have shewn themselves so devoid of the critical instinct as to infer seriously that the men of Armagh ate their meat raw, and that their womenkind wore no clothes. A "Bohemian barron," equally unknown, told Moryson, "in great earnestness"—as he naturally would, when applying such severe tension to his friend's nether limb—a tale of a cock and a bull relating to some curious experiences which he professed to have had in the house of an Irish chief. Down goes the story,[2] and moderns fish it out from Moryson's pages, and copy and re-copy it, and trick it out with all manner of unauthorized embellishments,[3] until the reader who believes without question or criticism what is printed in books goes away with the notion that Elizabethan Ireland was more closely akin to Eden before the Fall than any other country in the Temperate Zone!

mercy assuming humility, or belongs to a remote time which is naturally less civilized. For elaborate disquisitions on ancient Irish dress, entering into details for which no room could be found in the present work, see Wilde, *Catalogue* pp. 275-331: O'Curry, *Manners and Customs* vol. i p. 378 ff., vol. iii p. 87 ff.: Joyce, *Social History* vol. ii p. 179 ff.

[1] Fynes Moryson, *Itinerary* (reprint, Glasgow, 1908) vol. iv p. 202.

[2] *Op. cit.* iv p. 237.

[3] Mrs. J. R. Green, *The Old Irish World* p. 23 ff., has traced the development of the story under different manipulators.

Moryson himself was not behind his Bohemian friend in this sort of gossip. He tells us that he saw "young maides, starke naked" in Cork, engaged in grinding corn—adding particulars which those who make use of his story are content to leave within the covers of his book, for Moryson was a rather coarse person. Obviously, even if the story is true at all, it was an exceptional case. He saw certain definite "maids" engaged in a certain task; nothing could be more specific. We may be sure from his silence that the dozens of other maids whom he must have seen in Cork made no such claim upon his attention.

Down to the beginning of the last century, perhaps even later, in the remote parts of Ireland, the young children of the very poor might sometimes be seen playing about their hovels with little or no clothing upon them;[1] and there is no reason whatever to suppose that what Moryson saw was anything more sensational. To our ears the expression "young maid" suggests a rather older person than it would to an Elizabethan. Even in this one exceptional case the nudity of the Cork children was not necessarily habitual with them. They were engaged in what was considered the heaviest of all household tasks—one perhaps beyond their strength; and they had very sensibly thrown off unnecessary encumbrances. Or possibly their mother may have taken their clothes from them, for repairs or what not, ten minutes before the rude stranger trespassed on their innocent domesticities. It matters little: what is really important is the lamentable fact that men of much learning but little wit have founded, on the slender basis which this incident affords, disquisitions full of owlish nonsense about "survivals of the lower cultures" and all the rest of it!

This is the one entirely inadmissible explanation of the incident. If Elizabethan and Jacobean Ireland was a land of degraded savagery, as it is depicted by Moryson and his kind, then that degradation was a *new* thing. It was, actually and literally, a degradation, and, as such, can only have been the result of the Anglo-Norman invasion and the subsequent and consequent events. In the pre-Norman literature there is nothing comparable with these sordid pictures; though we may admit that some of the riotous scenes reported as having taken place at the court of Medb, queen of Connacht—who lived a very long time ago—do faintly recall some of the orgies of the Restoration or of the Regency!

[1] The doubter may be referred to Lady Chatterton, *Rambles in the South of Ireland in the year 1838*, vol. i p. 60. I have a MS. diary of a tour in Connemara, of about the same time, with evidence to the same effect.

Seriously, it is high time that these tiresome Cork children should be decently wrapped in their winding-sheets and buried. They have no more to do with the civilization of their land and century than a modern child who has the misfortune to be the offspring of hygienic faddists—or, for that matter, a child in a normal household taking a bath! Yet these poor little wretches are dragged back from the world of shadows, year after year, to bear their futile testimony on all sorts of subjects, from the date of flint implements to the righteousness of the Plantation policy!

Roads

Artificial roadways of logs have sometimes been found in Ireland in cutting peat. These were undoubtedly causeways through soft boggy land, and they are of importance in connexion with the general question of ancient roadways and means of communication. They are similar in construction to the American "corduroy roads," being made of logs of timber placed side by side and supporting wooden planks. A good example at Ballyalbanach (Antrim) is described by Kinahan.[1] On the townland of Longford-pass (Kilkenny), there was found, about the year 1835, a well-preserved road 12 feet wide, the upper surface of which was composed of broken stones; it was covered with 7 feet of peat.[2] Another, covered with about 4 feet of peat, was discovered in the neighbourhood of Clonmacnois. It is described as being "a kind of framed passage," composed of "side beams 25 feet long with a mortice at every 4 feet 6 inches and a joist of 3 feet 6 inches to support the floor. At every mortice there was a stake of about 5 feet long, with a pointed end." This description conveys no very clear conception of the construction to me, so I transcribe it as I find it.[3]

Another roadway, found about a mile south-east by south of Robertstown (Kildare), consisted of five pieces of wood laid lengthwise, making a causeway 4 feet 9 inches wide. The central piece was a plank of oak, 2 feet wide and 5 inches thick, flanked on each side by round pieces of pine or fir 6 to 9 inches in diameter. One of the perfect oak beams was 27 feet in length. When the bog was uncut there was about 10 feet thickness of peat overlying the causeway.[4] Another similar roadway of planks at Monavullagh Bog (Kildare) is described by Lord Walter FitzGerald:[5] and another in a bog called

[1] *Journal Anthropological Institute* v 106.
[2] JKAS iii p. 132.
[3] JRHAAI xi p. 279.
[4] J. K. Millner in JRSAI xxxix p. 93.
[5] JRSAI xxviii p. 417.

Duncan's Flow (Antrim) by Kinahan, with illustrative diagrams.[1] An oaken floor, apparently of a house, with a causeway leading to it, at Cargachóg, Monachan, is described by Mr. George Morant.[2]

The Disposal of the Dead

Very few interments certainly belonging to the Pagan Iron Age have been discovered in Ireland; and still fewer have been excavated with the attention to minute detail which science demands. Brief notices of the most important may here be given; but a sufficient body of material has not yet been collected to enable us to formulate any general principles.

Kiltale (Meath). A tumulus in the shape of a frustum of a cone, 60 feet in diameter and 12 feet high. In its middle, a rudely constructed cist—a flagstone, supported at a height of 7 feet above the surface of the ground, at one side by an upright slab, at the two ends by large round stones. Beneath was the skeleton of a man with a bronze sword-blade and an iron spear-head. When the tumulus was cleared away it was found to have been erected over a pit resembling, but not quite analogous to, the pits described by Greenwell.[3] In the case before us the pit was earlier than the tumulus; it contained what was apparently a bronze-age burial, with a deposit that included an urn (smashed by the diggers) and "a thin piece of either brass (read bronze) or copper, about 18 inches long, which was figured or carved at the edges, but this has not been recovered or traced."[4] According to the description quoted, the body to which the skeleton belonged had been buried in a standing posture. So, we learn, was the body of Loiguire mac Neill buried. This king, in whose time began the mission of St Patrick, was buried in his armour, upright, at Tara, facing the province of Leinster, to which he was ever hostile.[5] The combination of a bronze sword and an iron spear-head is suggestive of a transitional period corresponding to the Hallstatt of the Continent, and increases our regret that this discovery was not postponed till a time when it could have been properly studied.

Dunadry (Antrim). This most interesting burial is described in the following careless words, which contain all that we can now hope to know of it:—

"Mr. J. Huband Smith exhibited a stone urn, with a glass

[1] JRHAAI xiii p. 378.
[2] *Ibid.* x p. 269.
[3] *British Barrows* p. 9.
[4] PRIA iv p. 388.
[5] *Tripartite Life of St Patrick*, ed. Stokes, vol. i p. 74: Tirechan, *apud. op. idem* ii 308.

urn [ring ?] found in a tumulus at Dunadry, county of Antrim. On its surface [of the tumulus, *bien entendu*, not of the urn !] there was a rich black loamy soil, and the farmer on whose land it was being resolved to spread it over the adjoining ground, proceeded to remove it for that purpose, and in doing so came to the cairn [cist ?] in which he discovered at a depth of three feet from the surface on the eastern side, and lying horizontally, a human skeleton, having on its head a ring of lignite, at the feet the stone urn, and a little glass ring. The urn was distinguished from those found hitherto by having handles at the sides, and a brass [bronze ?] top. The mound, which was exceedingly large, was now entirely effaced." [1]

It is most deplorable that this perfectly unique interment was not properly examined and recorded. We are not allowed to know anything about the shape or the size of the tumulus —" exceedingly large " tells us nothing. Nor is the construction of the burial chamber specified. It goes without saying that not a single bone of the skeleton was scientifically described. The lignite ring on the head is most remarkable : but where on the head was it placed ? Was it a crown or a large ear-ring ? If the latter, was there a corresponding ring on the other side, which the yokel whom a benevolent government thus permitted to tear a page from his country's history over-looked ? Was there really " a glass urn," or is " urn " a mis-print for " ring " as a later sentence suggests ? (I have looked up the manuscript minute of the meeting at which the exhibit was made, but without finding light on this question.) Evidently the interment was not Christian ; the glass ring forbids us to date it to the Bronze Age ; it must therefore belong to the intermediate La Tène period. The grave-goods thus summarily described have disappeared ; we can only hope that some explorer more competent will light upon a similar interment-mound, and will describe it properly. Stone urns are rare, but not unknown : [2] this, however, seems to be the only recorded example with a metal cover.

Seskin (Kilkenny). A tumulus 30 feet in diameter, 5 to 6 feet high, demolished, like so many other important earth-works, for top-dressing. When the tumulus was reduced to the level of the surrounding land, a heap of stones was found within it, not placed in any order. Beneath these there were two bronze pins, and an iron scissors of the sheep-shearer form. There were also about a dozen small bones, said to resemble those of young goats, but no human bones were recognized.[3]

[1] PRIA v p. 299.
[2] A few are described in UJA I ix pp. 236-8.
[3] See the report in JKAS i p. 32.

Tullycreevy (Fermanach). A structure in the shape of a half pear, cut longitudinally and resting on the flat side; length 107 feet, breadth 55 feet, maximum height 13 feet. The construction consisted of a layer of great stones laid on the ground, which had apparently been flattened to receive them; above these there was a course of flagstones, laid with a gentle slope downward toward the outside of the monument. Above these again there was a second course of large blocks, with another course of flagstones over them, and so on to the top. The whole was covered with flagstones, overlapping like the slates of a roof, over which was a layer of yellow clay, 2 feet thick. No cist was found in this most singular structure, but the excavation was left incomplete owing to local superstitions. In the heart of the mound there was found a stone with, apparently, bronze-age ornamentation, built in upside down. This seems no longer to be forthcoming, and no record of its ornament has been preserved; but its situation suggests that the ornament had ceased to have any meaning for the builders, from which we may infer that the structure, whatever its nature or purpose may have been, belonged to the Iron Age.[1]

Grannach (Galway). A circular mound not over 2 feet high and 17 feet in diameter, surrounded with a vallum of about the same height, of 51 feet 4 inches external diameter. Immediately under the surface were the calcined and comminuted fragments of the bones of three persons, strewn in handfuls on the earth, and not protected by urns or otherwise. Two bones of a large ox were also found within the mound, as well as the top of a small bone pin, and fragments of two spherical green glass beads.[2] Mr. T. J. Westropp reports the existence of what looks like a similar earthwork at Knockaunvickteera (Clare).[3]

Lochrea (Galway). A very remarkable mound, for once carefully excavated and described.[4] It was a tumulus 9 feet high and 40 feet in diameter. On a floor in the middle were laid the skeletons of a young woman and of a small horse. Two horns and a leg-bone of a red deer were also found. Beneath the "floor" on which the woman's skeleton was laid there was a cremated interment with an urn inverted over it. The horse was of a breed very similar to specimens found at La Tène. It is uncertain whether the woman and the horse represent a secondary interment, or whether we have a case of

[1] T. Plunkett, "Account of the exploration of a long barrow [*sic !*] in the Co. Fermanagh," PRIA xv p. 323.

[2] PRIA xxxiii p. 508.

[3] JRSAI xxxvii p. 90.

[4] G. Coffey, "On the excavation of a tumulus near Loughrea, Co. Galway," PRIA xxv p. 14.

sati, which seems to have been very common, if not normal, in the Bronze Age.

Rathmoyle (Kilkenny). The report of this burial is very tantalizing.[1] It was situated in an earthwork described without further specification as a " rath ". Practically all that we are told is that in digging it away for road-mending material, a large number of human skeletons were found, interred without either coffin or cist. No grave goods were deposited. The bones were thrown about and lost. Horns of fallow deer and bones of sheep were included among the few bones which Mr. Graves could rescue. Such very simple and haphazard interments might belong to any age: they might even be a mediæval plague-pit—and it is more for convenience than anything else that the deposit is mentioned here. It is useless to us except to point the moral that valuable anthropological material of the kind gets rarer every year, and future discoveries of the kind must really be more conscientiously explored than heretofore.

Cuffborough (Leix). A very remarkable tumulus was opened here, in about 1853. It was peculiar in that it enclosed a beehive structure of small stones, instead of the more usual cist. The chamber contained two skeletons, apparently a man and a woman: once more we suspect *sati*, for in order to be buried together in such a structure, they must have died together. There were no grave goods. The construction of the burial chamber is suggestive of a late date, which is why it is noticed here.[2]

Carrabeg (Mayo). An underground structure about 14 feet long, 6 feet wide, and 7 feet high, 3 feet below the present surface; the sides lined with large stones, oversailing to the top, and the roof formed of flat flagstones. A passage runs into the chamber on the east side. Two skulls and " a spear-head all eaten with rust," and therefore presumably of iron, were found, but these appear to have been lost. The stones used in the construction are not local. The chronology of this interment is necessarily vague, owing to the imperfect information available about it.[3]

Early Christian graves often occur which recall in appearance the ancient stone-lined cists, the place of the coffin being taken by slabs of stone at the sides and ends with smaller slabs laid over them. Not infrequently a white stone is found within them, which doubtless has some symbolic value. A list of examples of such graves is given by Rev. J. O'Laverty:[4] to this some might be added, as, for instance, two or three which

[1] Rev. J. Graves in JKAS ii p. 190.
[2] *Ibid.* p. 358.
[3] JRSAI xxiv p. 390.
[4] JRHAAI xv p. 105.

I saw uncovered during the restoration works at Iona Cathedral: and a cemetery uncovered in the course of railway works at Dundalk.[1]

Perhaps the most remarkable of such Christian cist-graves was one found at Dromiskin (Louth). Here was made one of those discoveries that sometimes come to light, and that are the despair of the archæologist, so unintelligible are they. Dromiskin was the site of an important Christian establishment: a Round Tower and a tall standing cross still remain. There can be no doubt that the burial here referred to belongs to the same period, and is probably of the eighth or ninth century A.D. at earliest. The burial was in a field adjoining the graveyard where the Round Tower stands. Yet there were some early features. The body was deposited in a cist of flags, and, if we may believe our authority, some sort of burning must have taken place, for the cist was full of traces of charcoal.[2] The body, however, was unburnt, and the skull was preserved; the author of the paper comes to the unkind conclusion that the owner of this skull "if phrenology be true," had "a very bad character, exhibiting much energy in all that was evil" [!] With the body was deposited a small box of grit, not quite regularly fashioned, but about 2½ inches high, and 4¼ by 3⅞ inches in cross dimensions, rebated at the top for receiving a cover; this was in position, and was of greenstone. The stone box contains another box, of yew-wood, almost exactly fitting inside it, and apparently covered with leather. It has a sliding lid, secured with a bronze spring. Both boxes are now to be seen in the National Museum. Inside the wooden box was a small bronze pin, the stem of which was of a flat section (not unlike a miniature sword in shape), with the head looped and containing a movable ring. This pin would be of about the date mentioned above: certainly not earlier. The box also contained "some very unctuous charcoal" which was "perhaps the remains of the heart of the owner of the pin, probably a female". As another authority declared that the skull (of the "bad character") was probably male, we have here the raw materials of a picturesque romance!

[1] JRHAAI xv p. 447.

[2] Rev. G. H. Reade, "On an ancient interment discovered at Dromiskin," JKAS vii p. 199.

CHAPTER IV

THE BEGINNING OF WRITTEN RECORD IN IRELAND

A Statement of the Problem

IF we study the very earliest manuscripts which survive in Ireland, we find ourselves called upon to accept or to reject their evidence on matters as far removed from their own date as we are from Charlemagne, or from the Norman Conquest of England. Obviously the historian must reject their testimony as worthless, or nearly so, unless he can prove that the great gulf between event and record is bridged by a chain of written documents, now vanished, but available for the use of the scribe whose work we can handle. We thus encounter a question of the first importance, which we must decide before we can use our manuscript authorities as trustworthy witnesses on historical or archæological matters: When did writing begin in Ireland?

A datable chain of Irish writings exists, beginning with the glosses written, about A.D. 700, in a MS. of the epistles of St Paul at Wirtzburg, and some other minor documents of about the same time. The peculiarities of the language of these and similar writings have been tabulated, and thus a scale has been formulated whereby other documents can be approximately dated. It is true that copyists in successive generations have altered the language of the texts without compunction—for the practical reason that they were working, not for the philologists of these latter days, but for the readers of their own time. Indeed, one noted scribe most bitterly complains that his superiors had laid upon him the charge to copy his exemplar without attempting to improve upon it.[1] But they frequently overlooked here and there some early verbal form or mode of orthography; fossils embedded in the modernized text, which betray the real date at which the document was first drawn up. In this way we can prove that romances, sagas, poems, theological treatises, histories, and so

[1] Quoted by Rev. C. Plummer, "On the Colophons and Marginalia of Irish Scribes," *Proceedings of British Academy* vol. xi.

forth, which make up much of the earliest literature of the country, began to be written down in something approximating to their present form from about the sixth or seventh century onward, although no manuscript containing them survives from a date anterior to the beginning of the twelfth.

But even then we are a long way from the events which they profess to describe. Events dated traditionally to about the Christian era would be as far from sixth- or seventh-century records as we are from the Crusades: and while it is conceivable that oral tradition would preserve to us vague reminiscences of events so remote, it could not be expected to transmit historically satisfying details. We ask ourselves, are the events professing to be history, written in the sixth and seventh century, and described with great fullness, based on nothing but oral tradition? Or are they mere inventions, with nothing behind them at all?

We shall take the latter alternative first, and shall pay it the undeserved compliment of considering it seriously. No doubt historians embellish their materials. A Thucydides or a Josephus will put into the mouths of their characters, not the speeches which they actually uttered, but those which they might, could, or should have uttered, in the opinion of the narrator. But the art of *consciously inventing* fiction is a late phenomenon in literature: and, on the whole, we may take it for granted that when an ancient author sets down an account of events, he is writing what he honestly believes to have actually happened. Whether the basis of his belief be sound or not is another matter. This principle applies even to cases when an obvious impossibility is recorded. We must make allowances for the scientific ignorance of the spectators, and for their readiness to accept the evidence of miracle. But unless the contrary can be definitely proved, we must at least allow the possibility, in all such cases, that something happened, or that something was seen, by actual vision or by hallucination. We may not always be able to determine the nature of the "something" exactly, and it is quite certain that the spectators did not know it. A good case in point is the lamentable experience of one Sisillus Esceir-hir, "Long-legged Sisillus," as narrated for our edification by Giraldus Cambrensis.[1] During a severe illness this person "suffered a persecution from toads as violent as though the reptiles of the whole province had come to him by agreement". This was a miracle in the thirteenth century; in the twentieth it simply means that Sisillus was afflicted with *delirium tremens*, and the

[1] *Itinerary through Wales*, II ii.

tale may be accepted at its face value, though the glamour of mediæval romance is quenched in the sordidness of the prosaic fact.

If, then, we are not justified in assuming the statements made in these early documents to be "the fictions of crazy bards," as they have been unsympathetically called, are we then to suppose that there is nothing behind them but oral tradition? Even in such a case, there is no reason why they should not contain germs of historic truth. There are those who would persuade us that recollections of historic fact fade rapidly from the minds of unlettered peoples: that if, for instance, half of an island should be devastated by a tidal wave, the dwellers in the other half would have lost all recollection of the disaster in less than a hundred years. Such assumptions are often repeated, and by repetition they acquire an authority which they do not deserve.[1] But while oral tradition may preserve the outlines of a historical event, it cannot always preserve accurately the minute details. It adapts itself to the evolutionary modifications of culture. A tale told originally of slingers introduces in succession bows and arrows, blunderbusses, and Maxim guns. As walking gives place to driving, and this to travelling in train, or motor-car, or aeroplane, the narrative adjusts itself to the experience of successive generations, and ends by becoming a farrago of different strata of culture. If a sixth or seventh century document were founded on orally-transmitted folk-lore, it would reflect the culture, not of the time to which it professedly refers, but of the sixth or seventh century. Even in a modern historical novel, written with reasonable care, nothing is easier than to make slips. There are not wanting novels professing to depict Tudor times which introduce baronets. We need say nothing of the slovenly inaccuracy of Dumas; but even a reasonably good antiquary like Sir Walter Scott equips Ivanhoe, in the tournament scene, with armour of a style about a century too late. If such solecisms are possible to a writer who could have obtained accurate information if he had sought for it, what blunders might we not look for in a historian of the sixth or seventh century?

Indeed, it would not necessarily have occurred to a mediæval historian to manipulate his local colour artificially. His artist brother, when he depicted Scriptural scenes or characters, did not trouble his head about archæological accuracy. He attired

[1] Mr. J. W. Bilby (*Among unknown Eskimo*, p. 18) tells us, on the other hand, that the Eskimo retain traditions of Frobisher's visit in or about 1578, and narrate circumstantial details of events which then took place, passed down orally through the intervening generations.

his figures in the costumes, and set them in the landscapes and among the buildings, to which he was himself accustomed. Many years ago I saw in an auction-room in Germany an old painting of the Madonna and Child : I forget the artist's name, if, indeed, I ever learnt it. The central figure was seated in the usual mediæval palace, with a window in the background commanding a view of a distant village, from the centre of which rose *a church spire !*

Now, just in points where, in such circumstances, we might have expected mediæval chroniclers to have gone astray, they actually display a striking accuracy. If the use of war-chariots had been abandoned before their time, we might have expected them to represent their heroes as fighting on foot or from horseback. But, though chariots in war had long gone out of use before the time of the early Irish chroniclers, we find that heroes such as Cu-Chulaind, who are placed in the first century B.C., habitually use them ; whereas those of the later, or " Finn " cycle, the date of which is assumed to be the third century A.D., never use them. From the point of view of historical accuracy, this is absolutely correct ; and it is all but impossible that such a distinction should be preserved by mere oral tradition. This is only one of several coincidences of the kind, between the Cu-Chulaind saga and the La Tène civilization, where we should expect to find it—coincidences that leave no escape from the conclusion that the sixth and seventh century writers had before them some *literary* materials, linking them with the La Tène period, and offering to them the foundations on which they based their work.[1]

No doubt, it is quite possible for a " literature " of some elaboration to come into existence in a community which has not actually acquired the art of writing. There is, indeed, good reason to believe that Celtic, like Sanskrit, literature began in sacred hymns and formulæ which were conceived in the mind, and were transmitted orally. Nevertheless, the archæological accuracy of detail in the Irish *prose* historical literature must be taken as a proof that it is based upon an older *written* tradition, although the analysis of the language of the extant documents forbids us to assign them in their present form to an antiquity so high.

What, then, was the nature of this earlier literary tradition, of which not a vestige has survived ? How was it written ? Why did the seventh-century writers find it necessary to remodel it so completely that it can no longer be traced directly

[1] For a study of these coincidences, see (Sir) W. Ridgeway, " On the date of the first shaping of the Cuchulainn saga," *Proceedings of the British Academy* vol. ii.

in the extant documents? These three questions are essentially three aspects of one problem.

Writing in Pre-Christian Ireland

In the first place, we must not think of a formal pre-Christian literature of books in the modern sense of the word. The fact that almost all Irish words which mean anything connected with writing—such as the words for book, pen, parchment, and so forth—are loan-words from Latin has long been familiar to students of Irish literary history,[1] and has been used very reasonably and very ably as an argument against the use of writing in the country before the advent of Christian missionaries, who introduced the art of writing along with a knowledge of the Latin language. The few exceptions to this rule are mere specializations of words used previously in a general sense: thus *dub*, "ink," simply means "black"; *adaircín* "ink-horn" is a diminutive of a word denoting any sort of horn. But the argument must not be pressed too far. It is possible to have a literature that makes no use of books or parchment, and that is committed to writing without either pen or ink. Documents can be scratched on wax, impressed upon clay tablets, cut in bark or in wood. We actually possess two tablets of Irish provenance, made of wood coated with wax, and bearing writing scratched upon them. They are to be seen in the Royal Irish Academy collection. Neither of these tablets bears writing of historical interest; one of them has a number of disconnected sentences in Latin, apparently a student's exercise; the other has certain psalms, seemingly written for a similar purpose. Neither of these specimens is of any very high antiquity, but they doubtless represent an ancient tradition.[2]

The Analogy of Runes

Among the Teutonic peoples an alphabet was evolved especially destined for writing upon wooden tablets. This is the alphabet called *Runic*, which, in various forms, was used in the northern lands at least from the second century A.D. onward to about the end of the sixteenth. The Runic alphabet

[1] See a list of such words in Stokes, *Lives of Saints from the Book of Lismore*, Preface, p. ciii.

[2] See J. H. Todd, "Remarks on some fragments of an ancient waxed table-book, found in a bog at Maghera, county of Derry," TRIA xxi p. 3: Coffey, *Guide* p. 83: Armstrong and Macalister, "Wooden book with leaves indented and waxed found near Springmount Bog, Co. Antrim," JRSAI l p. 160. For literary references to the use of such tablets, see Stokes, *Lives of Saints from the Book of Lismore*, in the lives of Ciaran and Brendan, lines 3698, 4050.

is essentially a modification of the Roman alphabet, in which oblique lines are substituted for horizontal, and angles for curves. There are other modifications and simplifications as well, but these are the chief points. The reason will be obvious to the reader who may remember having tried to cut his name on his school desk. Lines which lay in the grain of the wood were less easy to cut than those crossing the grain, owing to their tendency to splinter; and curves were much more difficult to manage than straight lines. The Runic letters are designed to evade these difficulties. The horizontal strokes of the first letter, F, would lie in the course of the grain; they are therefore sloped (ᚠ). The letter O, being a continuous curve, is especially difficult to cut; it therefore becomes a lozenge (ᛟ). For our present purpose, it is of especial importance to notice that at least two of the Runic letters were derived, not from the Roman, but from the Greek alphabet. These are the characters for G and NG. The sign for G (X) does not in the least resemble the Roman letter; almost certainly it is a modification of the Greek Γ, with the horizontal top stroke first made oblique (ᛚ or ( ), and then with the vertical stroke also made oblique, partly for symmetry, and partly to avoid confusion with the signs for L (ᛚ) and K (ᚴ). This produced Λ, and finally the two lines were made to cross in the fully developed character. The symbol for NG varies in shape, but all the forms are recognizable as combinations of two *Gammas* interlaced, shewing that in the Runic as in the Gothic orthography, the Greek convention of representing this sound by doubling the Gamma was imitated. The letter for TH (ᚦ), for which the Roman alphabet afforded no model, is also apparently taken from Greek, the Theta being turned round a quarter circle for the same practical reason as before, and the character simplified.

Thus the very form of the letters of the Runic alphabet is evidence that in Northern Europe, from the second century A.D. onward, if not earlier, the practice of scratching or cutting literary documents on wooden tablets was in use. There is literary evidence to the same effect available. Saxo Grammaticus tells us in his *History of Denmark* [1] of how the legendary king Feng, uncle of Amleth (Shakspere's *Hamlet*), sent messengers to Britain with a letter for the king thereof graven on wood, "a kind of writing material frequent in old time". The seventeenth century Danish antiquary, Olaf Worm, possessed a slip of wood a few inches long, inscribed, apparently,

[1] Elton and Powell's translation, p. 113.

with a lover's message.[1] The object itself has long been lost, but most fortunately Worm has given us an engraving of it. The British Museum possesses another specimen similar to this.[2]

Documents on wood were thus familiar in the lands bordering on the North Sea: and most probably the same material was used for whatever writings were in existence in Ireland before the coming of Christianity. Not till the coming of Christian missionaries, with their Gospels and Service-books, were parchment volumes known in Ireland. With this conclusion accords the evidence yielded by the few references to writing before St Patrick's time to be found in the extant literature. Texts are said to have been written "on poets' staves," for which there are several names in Irish, all seeming to imply objects made of wood, and very suggestive of waxed boards like those referred to above. One of the most important of these passages is to be found in the valuable tract called *Acallamh na Senórach* (Colloquy of the Elders). In this document St Patrick is represented as listening with delight to the tales which the survivors of the ancient pagan heroes tell him, yet with qualms as to the propriety of his spending time over matters so worldly. But his guardian angel reassures him, in a speech which surely voices the enthusiasm and the regrets of some eager antiquary: "Patrick, not one-third part of their tales can those men tell thee, by reason of forgetfulness and of loss of memory. But let what they tell thee be written *on poets' staves, and in the language of men of learning*, that they may be for a delight to the men of times to come." [3]

Baile and Aillenn

An oft-quoted tale, the romance of Baile and Aillenn, is here in point.[4] Baile and Aillenn were two lovers, who, like Romeo and Juliet, were falsely informed each of the other's death, and died of grief. Over the grave of Baile there grew a yew-tree, over that of Aillenn an apple-tree. The likeness of each, we are told, was in the top of the trees over their respective graves. This is merely another way of saying that the trees *were* Baile and Aillenn, in another form of existence; that, in accordance with a widespread belief, the life of the buried dead had passed into the trees and other plants that grew over their sepulchres. In time the trees were cut down,

[1] *Danicorum Monumentorum libri sex* (Copenhagen 1643), p. 299.

[2] G. Stephens, *Thunor the Thunderer* (London 1878), p. 52.

[3] *Acallamh na Senorach*, in O'Grady's *Silua Gadelica*, vol. i (text) p. 100, vol. ii (translation) p. 108; ed. Stokes (text only), p. 9.

[4] Text and translation will be found in O'Curry, *Manuscript Materials of Ancient Irish History* p. 472.

and writing tablets were made of the wood. These tablets happening to be brought into contact, they sprang together as woodbine springs around a twig, and could not be separated. These tablets, thus joined together, are said to have been preserved in Tara until the burning of the palace there by Dunlaing, king of Leinster, in the year A.D. 222. This is a pretty tale, but it would be only partly intelligible if it did not relate to certain ancient wooden tablets which had somehow stuck together inseparably, and respecting which the story was told at the first. In fact, such accidents were probably not infrequent. The leaves of the waxen book with the psalms, mentioned above, had actually stuck together, and being forcibly wrenched apart, some of the wax was torn from the surface. Compare the behaviour of a book between the leaves of which some gum has accidentally been spilt.

The Ogham Character

In what alphabet was the writing on these tablets? It is often assumed that the remarkable script known as *Ogham* was the character used for literary purposes before the Christian era. This, however, is a complete impossibility, as we shall show in a moment. But as the inscriptions in the Ogham character have an important bearing on the present subject of discussion, we must devote some attention to this character, and to a consideration of its place in the problem.[1]

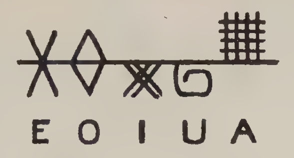
In the Ogham alphabet the separate letters are formed by means of groups of short strokes, in number from one to five, arranged in different positions with respect to a central long stroke. In manuscript writing the central stroke is drawn horizontal: on stone monuments, where the edge of a pillar usually takes the place of the vertical line, it is as a rule vertical. The following is a scheme of the ordinary form of the alphabet:—



with, in addition, five other characters, probably of later development, to represent vowels: these were contrived to

[1] The foundation of modern scientific study of the Ogham Inscriptions and their significance in Irish literary history was laid in Professor MacNeill's paper on the subject, PRIA xxvii p. 329. For collections of inscriptions see R. R. Brash, *Ogham Inscriptions of the Gaedhil* (London 1879)—a meritorious but not very accurate compilation: Sir S. Ferguson, *Ogham Inscriptions in Ireland, Wales and Scotland* (Edinburgh 1887), which is vitiated by obsolete methods of interpretation, and the present writer's incomplete *Studies in Irish Epigraphy*. There are numerous papers on individual inscriptions scattered through the proceedings of societies, of very unequal value.

enable writers to differentiate between vowels with palatization from those not so affected—in Irish, as in Russian, palatization is an important element in grammatical accidence. These additional characters are



but they are rarely used in inscriptions, and still more rarely in their vocalic sense. The sign for E is used to represent a guttural consonant ; the sign for I is used for P ; and the sign for A in the only place where it occurs (a scribble on the margin of a manuscript), is used as a monogram for SC. The sign for O, in the very few places where it occurs, has its vocalic sense ; the sign for U has never been found.

The number of the scores at once suggests that the alphabet was originally designed, not for writing, but for communicating by means of finger signs, like the deaf-mute alphabet of modern times. For this it would be very suitable : and there is an obscure passage in the *Poet's Primer* which seems to indicate that it actually was so used, the ridge of the nose or of the shin of the " speaker " being adapted as a stem-line.[1] On the other hand, it would be hard to devise an alphabet worse adapted for literary purposes. Consider, for example, this quatrain, from the romance called *Tochmarc Étáine* (" The wooing of Étáin ") :—

A bé find in raga lim,
I tír n-ingnad hi fil rind,
Is barr sobarche folt and,
Is dath snechta corp co ind ?

We are not here concerned with the meaning of these four lines,[2] nor does it matter that the documents which we actually find written in Ogham are not in Irish of the same stage of linguistic development as that of the quatrain. What matters to us is that if a bard wished to write these 78 letters in Ogham (counting *ng* as one letter), he would have to make 250 strokes (writing *v* for *f*). If these strokes were cut on the edge of a rod, they could hardly be less than an eighth of an inch apart, and even that would be exceedingly close ; so that, allowing no gaps for the differentiation of word- or letter-groups, this one stanza

[1] *Auraicept na n-éces*, ed. Calder, p. 296.

[2] Prosaically rendered, they mean : " O fair woman, wilt thou come with me to a wondrous country wherein is song answering to song, where hair is as the flower of the primrose, where the body from head to foot is of the colour of snow ? "

would fill a line between 31 and 32 inches long. There are seven stanzas in the poem from which the above quatrain has been quoted: assuming these to contain approximately the same number of scores, the whole poem would occupy a line over 210 inches in length. If it were cut as closely as we have suggested, on the four corners of a squared staff, the rod would have to be nearly 5 feet long. This poem is comparatively short, and refers to but one incident in a long romance; to cut the whole story on rods in Ogham would be impossibly toilsome, and the result impossibly cumbersome. Moreover, by a singular perversity of fortune, the commonest letters are those which require the greatest number of strokes. Counting *p* as a two-stroke letter, in writing the above stanza, 17 letters would require one stroke, 15 require two, 8 require three, 11 require four, and as many as 27 require five.

It follows that the Ogham character could never have been used for extended literary compositions. Nothing but the shortest notes and the brief inscriptions that we actually find, could have been inscribed with its aid. No doubt there may have been devices for abbreviating the labour of writing letters score by score. We may take it as certain that many varieties of the script were in use, some of them very fantastic: there is a large compilation of such varieties contained in the *Book of Ballymote*.[1] The orthodox form, however, set forth on a previous page, is alone used in the monumental inscriptions, although on the margin of a page in the *Book of Fermoy* there is a scribble in Ogham, as yet undeciphered, to which certainly the ordinary key does not apply. As for the Oghams that doubtless were once cut on staves and twigs, they have all perished beyond recall, and we can say nothing about them. From these considerations we may deduce as a certainty that the Ogham character was originally invented as a *manual* alphabet (like that used by deaf-mutes), for the purpose of secret communication between initiates of some kind—druids or the like—who had occasion to exchange their ideas in the presence of persons outside the charmed circle: and was not at first intended to be used for writing at all.

The written literature, if it existed, must, therefore, have been set forth in a different form of script: and, indeed, the mere existence of this manual alphabet presupposes, of absolute necessity, some method of writing upon which to base it. It

[1] See the facsimiles of the pages of this manuscript containing this compilation: Royal Irish Academy's Facsimile of the Book of Ballymote, pp. 311-14: G. M. Atkinson, "Some account of ancient Irish treatises on Ogham writing illustrated by tracings from the original MSS.," JRHAAI xiii p. 202. Brash, *Ogham Inscriptions of the Gaedhil*: Calder, *Auraicept na n-éces* (Edinburgh 1917).

is inconceivable that any community, or any man, could have invented a system of spelling in alphabetic characters by finger signs only, unless there were already in existence a system of spelling in written alphabetic characters to form the foundation of the invention.

Here, again, Runic writing helps us with a remarkable parallel. In addition to the ordinary Runic letters, there was in use a kind of linear cypher, resembling Ogham, and in all probability suggested by Ogham. There are several varieties of these "cryptical runes". A number of different forms appear on the great runic monument at Rök, in Gothland (Sweden); and others, not yet deciphered, on a fragmentary cross at Hackness, Yorkshire. For our present purpose of comparison we may take the commonest cypher, based on the simplest and shortest form of the alphabet. In this the alphabet is divided into three groups; thus

F U Th O R K
H N I A S
T B L M Ö

and the crypt-letters are formed of vertical strokes with short oblique side strokes, the whole resembling a tree with side branches. On the one side are strokes from one to three, indicating the *group*: on the other strokes from one to six, indicating the *position in the group* of the letter intended. Thus, K, the sixth letter of the first group, would be represented by a vertical line with one stroke on one side and six strokes on the other: A, in like wise, by two strokes on one side and four on the other; and so for the rest.

The similarity in the principle of construction of these two cryptical alphabets is obvious. If one of these systems is the original, and the other the derived form, we must call the Ogham the prototype. For the Ogham has a *natural* basis in the fingers of the hand; the Crypt-Runes have an *artificial* basis, in the principle of dividing the alphabet into groups: and nature must precede art.

Literary Culture among the Celtic Peoples

But before we proceed to enquire what the other alphabet was, on which the Ogham script was founded, it will be well to notice some external testimony to the existence of a literary culture among the early Celtic peoples. We learn through Diodorus Siculus[1] that at a funeral the bystanders were in

[1] *Bibliotheca* v 28.

the habit of casting letters, written to their dead friends, upon the pyre. This is told as an illustration of their intensely real faith in the existence of a life beyond the grave; but it illustrates equally well a fairly wide diffusion among them of the art of writing. Cæsar, in the well-known passage in which he described the druids and their teaching,[1] tells us that they freely made use of Greek letters in writing—a statement not altogether borne out by the few surviving Gaulish inscriptions; for, except those which have been found in the neighbourhood of the Grecian colony of Massilia, these are in the Roman or Etruscan characters. But, in the same passage, he gives us some further information about the druidic teaching, which is of especial importance in the present connexion. Instruction in the druidic schools, he tells us, took the form of learning by heart a great number of verses, which it was unlawful to commit to writing. This instruction sometimes filled no less than twenty years. Cæsar indulges in a little speculation as to why the prohibition of writing should have been so rigid in this one department of life and activity: and concludes that it was because the druids feared lest their monopoly of learning should be infringed by the common people, or lest their students' memories should become weakened by an undue trust in written notes. Here we need not follow Cæsar: analogy teaches us what the real reason must have been. Unquestionably, the verses studied in the druidic schools were sacred hymns, composed before the introduction of writing, and, like the Vedas in ancient India, preserved by oral tradition, because they would have been profaned were they to be committed to the custody of this novel art.

Assuming the existence of such a great body of traditional sacred literature, which required so long a time as twenty years to assimilate, some obvious deductions will follow. To the learned, these poems, in which they had steeped themselves, would inevitably set a standard of literary composition. The Authorised version of the Bible, and the plays of Shakspere, have, in like manner, set a standard for the literary language of England: the Ḳur'ān has stereotyped the literary language of the Arabic-speaking world. Further, a sacred poem is the very best medium possible for preserving in the memory obsolete forms of language. In the Metrical Version of the Psalms still used in Scotland, there occur such phrases as the following:—

> Before me still the Lord I set;
> *Sith* it is so that He
> Doth ever stand at my right hand,
> I shall not movèd be.

[1] *De Bello Gallico*, VI xiii, xiv.

or the not universally comprehensible couplet :—

> Froward Thou kyth'st
> Unto the froward wight.

In the Anglican liturgy, one of the best-known prayers begins with a petition that is not only unintelligible, but liable to serious misunderstanding : " Prevent us, O Lord, in all our doings "—so far has the spoken language drifted from the traditional forms of religion. At Rome, the ritual of the *Fratres Arvales* preserved relics of ancient verses in an archaic form of Latin, unintelligible to the common people, if, indeed, they were intelligible to the Arval Brethren themselves. All languages change with changing generations, and ultimately die. Notwithstanding her heritage of one of the noblest literatures of all time, the English of current speech is rapidly degenerating into a conglomerate of lazy abbreviations such as " bike," " flu," " soccer," " pram," " veg," " marj," and so forth, studded in a repulsive magma of exotic gibberish imported and naturalized by the " picturedrome " as it " features stars " in " gripping thrills " and " intriguing stunts ". The literary standard still remains, for the time being, but sooner or later it must collapse under these assaults upon its integrity. Those abominable words, " bus " and " cab," have completely established themselves in literary English ; " bike," " flu," and " pram " have almost succeeded in doing so ; before very long the only language of the ordinary Englishman will be this noisome jargon which is growing up to maturity before our eyes, and Shakspere will be as incomprehensible as Cynewulf to the man in the street. Opponents of the Gaelic revival, read, mark, and learn ! In that day it will be good for us to have, as a second string to our bow, a language which, with all its flexibility, does not lend itself to such barbarous mishandling. It will stabilize us even in our use of English.

Now, if the body of traditional verse of which Cæsar speaks was so great that its complete study occupied twenty years, it must have been at least as extensive as the material at our disposal for the study of Classical Latin. After a discipline so exacting, the learned classes would have been completely saturated in the language in which those poems were written. They could, and would, have used it in conversation among themselves ; and in so doing they would have been as unintelligible, to unlearned bystanders, as a couple of priests talking Latin in a company of French peasants. There are not a few references in Irish literature, some serious, some in a spirit of burlesque, to darkly occult disputations of men of learning, couched in a mysterious tongue called *bérla filed* (" speech of

poets "). Moreover, the learned classes would, as a matter of course, use this archaic language for literary composition. The written language, in what for convenience may be called the "druidic period," would follow the model of the obsolete archaic language of the sacred poems so far as the writers were able to imitate it. Now we understand why St Patrick was directed to write, *in the language of men of learning*, the tales that were told to him.

The Ogham Inscriptions

And as a neat proof that all this theorizing about documents, which have passed away for ever, is not a mere empty rhapsody, we have the tangible fact that the Ogham inscriptions, the Sibylline leaves surviving from that vanished literature, are written in just such an archaic form of the language as is here postulated.

To illustrate this statement, take a short and simple inscription on a stone that was found at Monataggart (Cork), and is now in the Royal Irish Academy's collection. It reads DALAGNI MAQI DALI. It is in the usual formula of such inscriptions ; two names in the genitive case, the first being governed by an unexpressed word meaning "stone," "monument," "grave," or the like, and the two united by a word indicating relationship. This inscription, as it stands, means therefore, "Stone of Dalagnos son of Dalos ". But in the spoken language of the time when the inscription was cut, the external case-endings *-os*, *-i*, had fallen away ; the diminutive suffix *-agn-* had lost its *g*, the vowel being lengthened in compensation ; in the Genitive, the consonants of the final syllable were softened, owing to the influence of the lost final *i*. Moreover, the sound represented by *q* (-kw-) had passed from speech, becoming a simple *k*. Thus, the substance of the inscription quoted would, in speech, be expressed *Dáláin maic Dáil.* We should probably have to go back a long time behind the date of the stone before reaching a stage at which the *natural* way of *saying* "of Dálán son of Dál" would be "Dalagni maqi Dali ". There once was such a time ; and it was in that time that the druidic hymns were composed. But it had passed away before writing began in Ireland.

Also in the Dublin Museum, lying side by side with the *Dalagni* stone, is another, from Killeen Cormac (Kildare) ; which is of very special importance (Fig. 12). The stone commemorates one *Uan*, or whatever the nominative of his peculiar name may have been. He was grandson of a certain *Eochaid*, and vassal, tenant, or follower of a local magnate called *Turleged.*

These facts are thus recorded on his monument: UVANOS, AVI IVACATTOS, CELI TURLEGETTI. The names of the owner of the monument, and of his overlord, are rare or unique, and therefore not easy to deal with; but the grandfather's name is one of the commonest in the manuscript literature, and from this we learn that the genitive, here written *Ivacattos*, would, in speech, be expressed *Eochada*.

In all such cases—any one of the existing Ogham inscriptions might be quoted in illustration—the "Ogham" form of the name is that from which the colloquial or manuscript form might have been derived by the ordinary processes of phonetic decay. The "archaizing" of the language of the inscriptions is consistent, and on the whole accurate: the Ogham forms, generally speaking, are uniform over the whole country, and agree with what modern philological theory would reconstruct as the true archaic form of the name. There are, perhaps, a few mistakes, which shew that the writer is working



Fig. 12.—The Killeen Cormac inscription.

in a not perfectly natural medium; but, as a rule, the restoration of the archaic form is successful. This means that the archaic literary language was carefully cultivated by those whose business it was. Genealogies would doubtless be recorded in the same stately style, though in speaking of descent the colloquial forms of the names would naturally be used. In like manner we may speak familiarly of such English historical characters as Jack Cade, Wat Tyler, Nell Gwynn, though, in formal or official registers, their Christian names would appear as John, Walter, Eleanor, respectively.

In the nature of things, an art of writing in which the documents were drawn up in an archaic dialect, almost as different from the spoken language as is the parent Latin from French or Italian, would not be cultivated outside the learned class. The vast majority of the folk were illiterate: the intervention of a man of learning was necessary to draw up even so simple an inscription as *Dalagni maqi Dali*. The stone-cutters themselves did not necessarily possess any clear

idea of what they were doing. We cannot suppose that the man of letters would himself have performed the laborious task of cutting the inscription on the stone; he would scratch a model upon a rod, or a waxed tablet, and give it to the artisan to copy. Sometimes the stone-cutter inscribed a superfluous score, or omitted one that was essential. Sometimes he interchanged the short side-strokes, writing B instead of H, D instead of L, and so forth, and *vice versa*. There is one stone at Aultagh (Cork) which bears a singular device that can best be explained as an attempt to make a rude picture of a model, cut on two rods tied together.[1] To leave the shores of Ireland for a moment, there is at Newton, Aberdeenshire, a famous inscription which has been cut by an illiterate workman, making a peculiarly incompetent effort to copy a model, itself, probably written cursively and not very legibly. Dozens of attempts have been made to decipher this inscription, in as many different languages, but all to no purpose. At Carew, Pembrokeshire, there is a fine cross with a similarly blundered inscription, only just within the limits of intelligibility. Someone unknown, at a date and for a reason equally unknown, attempted to make a copy of this inscription on a boulder at Baginbun Head (Wexford), and produced a hopeless jumble of unintelligible signs.[2] And perhaps this may suggest one reason why the Ogham character was used for monumental inscriptions, apart from any possible magical virtue that it might have been supposed to possess—its simplicity. An illiterate workman could copy it accurately, if only he was careful to keep correct the number and relative position of the scores.

But in this, as we have seen, he was not always successful: and the carver of the Killeen Cormac inscription made a yet more extraordinary mistake. But for this we may be grateful to him, for by his very stupidity he has answered for us the question which has been in the background of the whole contents of this chapter: *what was the other alphabet* used in Ireland for ordinary literary purposes?

Our stone-cutter was given a model on two rods, as follows:—

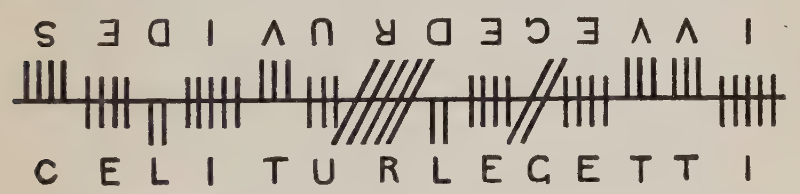
UVANOS AVI IVACATTOS on rod no. 1,
CELI TURLEGETTI on rod no. 2,

both, of course, in Ogham. He copied the first exactly, and found that it occupied the greater part of two angles of the front of the stone. To copy the rest of the inscription he would

[1] Figured in my *Studies in Irish Epigraphy*, iii p. 60.

[2] The original and the copy may be seen side by side in a paper by Dr. G. H. Orpen in JRSAI xxxiv p. 261 ff.

have had to go to the back angles, where the lettering might have been overlooked; although inscriptions on three, or even on four, angles are not unknown, they are for this reason rare. So it occurred to him to write the rest of the inscription on the face of the stone adjacent to the angles which he had inscribed, where it would at once attract the eye of a reader. But there was no convenient ridge to make a stem-line; indeed, there would have been insufficient room for all the letters in the clumsy Ogham script. He determined, therefore, to transliterate the inscription into Roman capitals. He knew the Roman letters, and he knew their equivalents in Ogham; but that was the end of his literary accomplishments, and it was probably more than most of his fellow-artisans had attained to. He could, so to speak, draw the letters as hieroglyphic characters, but he did not understand how they combined to make words. But when he set to work about his transliteration, he had the misfortune to turn his rod upside down. By this error he turned



into a meaningless row of letters which the reader will see by inverting the page, and this row of letters he engraved on the face of the stone.

The letter G is represented by a combination of two strokes, one vertical, the other oblique, like an N deprived of its right-hand upright, or an R deprived of its upper loop. The character has been read as a damaged R (producing the wonderful IV VERE DRVVIDES, " four true druids ") or as an imperfect N (producing the no less wonderful IUVENE DRVVIDES, " the druid youths "). But it is *certainly* neither the one nor the other. The only possible interpretation of it is that it is the Greek Γ, adopted to represent the sound of G, and modified, as in the corresponding Runic letter, for cutting upon wood. G was a comparatively late addition to the Roman alphabet; it does not appear earlier than the inscription of Scipio Barbatus, 234 B.C. We infer that the Roman alphabet must have travelled to the northern nations before it received at home the addition of this letter; and that as they could not dispense with a symbol for the sound of G, they borrowed the letter from the Greeks. This is a result of considerable importance; it puts the beginning of a literary tradition—rudimentary if

you will—among the northern nations back to a date round about the third century B.C.

Notwithstanding the mistake which our stone-cutter has made, his letters are carefully formed, with an assured, not to say expert, touch. These were certainly not the only Roman capitals which he had carved in his lifetime. Although this is the only inscription in Roman capitals surviving from ancient Ireland, we must conclude that it was a familiar script at the time when this inscription was cut. As the so-called "Irish" alphabet came in with Christianity—it is a modification of the Roman cursive hand of about the fourth century A.D.—it cannot be regarded as the script of the pre-Christian literature. We infer that whenever these early documents were written, Roman capitals were used; and that this was the alphabet in common literary use in pre-Christian Ireland. The association of Roman capitals with paganism may be the cause for the otherwise total disappearance of all the monuments inscribed in them. We saw in the last chapter that the analogous monuments with La Tène decoration would be especially repugnant to Christian iconoclasts. Perhaps it is not too far-fetched to guess that the very blunder, which the stone-cutter made, saved this stone from the destruction that befell all that were like it. The iconoclasts still retained relics of superstitious qualms; and they hesitated to interfere with a stone bearing so mysterious a "word of power".

Pseudo-Oghams

There is a curious point to be noticed in passing. Sometimes the survivors seem to have wished to have an Ogham over their deceased friend, but did not wish to employ the literary specialist—perhaps from inability or unwillingness to pay his fee. Being themselves illiterate, they were perforce content to scratch a number of meaningless strokes in and about the edges of the monumental stone: undoubtedly spurious imitations of Ogham, but incapable of being grouped into letters. A good example stands by the roadside at Hawkinstown (Meath), but this is only one among many (Plate IV Fig. 1). These pseudo-Oghams,[1] as they are called, are an indication that the inscription was not a mere memorial: that the sacred script was a mystic talisman, which in some way benefited the dead on his voyage into the unknown.[2]

[1] A distinction should be drawn between pseudo-Oghams, which are genuine monuments of antiquity, and modern forgeries, like a stone in the Pitt-Rivers Museum in Oxford, which reads FINN MAC COLLUM—a blundering attempt at writing the name of the hero Finn Mac Cumhaill! This was manufactured some time in the first half of the last century to sell to an unwary collector.

[2] For another example of pseudo-Oghams see Rev. S. Hayman, "On an Ogham stone found built into the wall of a house close to St John's Priory, Youghal," JRHAAI (1879-82) p. 33.

FIG. 1—PSEUDO-OGHAM AT HAWKINSTOWN, CO. MEATH

FIG. 2—THE MONUMENT OF THE POET LUGUTTOS

Oghams with Crosses upon Them

It may be objected to this that some, at least, of the Ogham monuments are Christian; many would say that they are all Christian monuments. Certainly they are often accompanied with crosses or other Christian emblems. If this were so, would not all the foregoing theorising break down?

If this were so, it undoubtedly would. It is an essential point in the argument that one result of the introduction of the Christian teaching was the destruction of the druidic learning in its original form, and of the archaic language in which that learning was preserved. But if these monuments are Christian they would present problems that are utterly insoluble. In any case, they cannot be far removed in date from the time of the earliest glosses; why, then, do they show a grammatical and orthographical tradition so different from that of the glosses—a difference, as we have already said, almost as great as that between Latin and French? They are influenced by a literary inspiration utterly diverse from that of the earliest manuscripts. There is no possible explanation of the fact that the words which they contain are not in the forms of speech current at their time, unless they stand at the end of an older tradition, which overlaps with the newer system that begins with the manuscripts. This difficulty confronted investigators from the first. The pioneers, not possessing the knowledge of philological laws that has accumulated since their time, were constrained to fall back on the strange notion that the names in these inscriptions were arbitrarily disguised, because the persons commemorated were stained by scandals. This is merely a curiosity of theorizing, and calls for no serious discussion. It is a fact that crosses are cut on certain inscriptions; but this does not prove that they are Christian monuments. There are cases where the cross interferes with the inscription. Often the crosses are cut on what was the original base of the stone, the monument having been turned upside down and re-set, so that the inscription reads downward instead of in the usual upward direction. This had a special purpose. At the end of the inscription there frequently came the ancestral name, eponymous of the family to which the deceased had belonged. Now it sometimes happened that the traditional ancestor was not a man, but a god. By inverting the stone, the god's name, now become obnoxious, was buried out of sight in the ground. This inversion may have been done in the first instance, by those interested in the preservation of the monument: for it often happens that

the ancestral name has actually been smashed from the stone —doubtless at the hands of some indignant Christian.

Against the stones with crosses upon them may be set a very interesting monument at Drumlusk (Kerry), which has a *circle* cut upon it. This is most probably a solar, and, therefore, necessarily a pagan symbol.[1]

We not infrequently find rude pillar-stones, similar to those bearing Oghams, but uninscribed, having crosses cut on one or more of their faces. Such a pillar, with or without Ogham, looks much more like a pagan than a Christian monument; and we may, perhaps, assume a similar explanation for the cross. These anepigraphic monuments were also primarily pagan, and the stone was reconsecrated to Christianity, or, at least, the paganism was expelled from it.[2] Tirechán gives us a curious story of a monument with a cross cut upon it which had been placed over a pagan burial by mistake;[3] and the signing of stones by saints with the symbol of the cross is a not uncommon incident in hagiological literature. An impressive example of the consecration of a pagan monument by the addition of a cross is presented by the tall standing stone at Doonfeeny (Mayo). This monolith is square in section, but its long axis is of a peculiar curved shape; it rises to a height of about 20 feet, being one of the tallest pillar-stones in the country. At the base of the stone is a device consisting of a cross *fourchée* above a cross *pattée*. It is quite unreasonable to suppose that these symbols would have been placed where they are if the stone had been intended to bear them from the first: they would have been cut at the head of the stone, before it was erected. They have undoubtedly been added at some later time, when the stone had already been set in position.[4]

The crosses cut upon these two types of monument are, as a rule, of the simplest possible type; two lines, vertical and horizontal, intersecting one another, with the lower part of the stem usually, though not always, longer than the upper part or than the side arms. Generally, the four extremities of the component lines are terminated with a triangular expansion, but otherwise they are not, as a rule, ornamentally treated. The addition of a wheel, forming the so-called Celtic cross, is rare.

[1] Figured in my *Studies in Irish Epigraphy*, ii p. 116.

[2] It is possible that stones now uninscribed once bore a wooden wreath with an Ogham cut upon it: there is mention of such a device in the romance called Táin Bó Cúalnge, ed. Zimmer, line 565, tr. Dunn p. 30.

[3] *Vita Tripartita Patricii* vol. ii p. 294.

[4] See the illustration in JRHAAI xv pp. 754-5: also *idem*, xlii p. 114.

The Construction of the Ogham Script

We must now return to the Ogham script, and enquire by what steps it was derived from the Roman alphabet, as modified and adapted to serve the ends of the druidic scholars. The following is at least a possible process.

It is a common experience, in both ancient and modern times, that when an alphabet is borrowed for writing a previously unwritten language, it undergoes simplification by the omission of unnecessary characters. The ancient Persians reduced to an alphabet of moderate length the cumbrous cuneiform script; the Japanese have treated in like manner the monstrous maze of the Chinese script. Modern missionaries in Africa make a comparatively small selection of the Roman letters to form an alphabet for the language of their converts. Similarly, the Roman alphabet, as used at the time of the invention of the Ogham script, seems to have been one of eighteen letters, namely :—

A B C D E G H I L M N O Q R S T V Z

This was not necessarily the alphabetic order of the letters when they were first adopted. It cannot have been so, indeed, seeing that a symbol for G was inserted in the alphabet before the Romans themselves felt the necessity for such a character. The Germanic peoples also departed from the orthodox Roman order, for in all early forthsettings of the Runic letter-row the series begins F U Th O R K, etc. But in later times the Rune-writers conformed to the Roman order, and the druids had done the same by the time that the Ogham symbols were invented. It will be noticed that among the rejected letters were the surd labials F and P; these were unnecessary for writing a language which did not use those sounds. It is surprising to find Z; but this may have been used as a convenient compendium for ST: it may also have been necessary for magical formulæ borrowed from Greece or elsewhere. The letter V, of course, did double duty as vowel and consonant.

The inventor of the cypher, having decided on the scheme of his finger-letters, in four groups of five characters each, added two other letters in order to swell this alphabet to twenty characters, and so to obtain a multiple of five. He added a consonantal V and a symbol for Ng at the end of his version of the Roman alphabet. In this he shewed a grammatical instinct in advance of those who later adapted the Roman cursive script to the writing of the colloquial Irish of their day. These were content to retain the double symbol n, g for what is an important single sound in the language.

Next he proceeded to separate out the vowels from the consonants. The distinction of vowels from consonants, and their arrangement in an order which recognized the distinction of "broad" (*a, o, u*) and "slender" (*e, i*) vowels—a distinction of importance in Irish grammar—shews that we have to do with the work of a grammarian. And naturally we should expect grammar to be assiduously studied in the Irish schools, as it was in the Indian, and for the same reason: because the scholars were preoccupied with a literature in an obsolete form of language and were obliged to study its construction in order to comprehend it. The alphabet was now of this form:—

A O U E I . . . B C D G H L M N Q R S T Z V Ng

Next he took the initial letters of the first five numerals —a step suggested, perhaps, unconsciously, by the use of the fingers in counting—as their names were pronounced at the time. These were H D T C Q.[1] The alphabet was now:—

A O U E I . . . H D T C Q . . . B G L M N R S Z V Ng

Next he took every second letter of the remainder:—

A O U E I . . . H D T C Q . . . B L N S V . . . G M R Z Ng

And finally he rearranged the five letters that remained, cyclically, starting with M, as nearly as possible the middle letter of his original alphabet, and running backward. This was merely to add an element of complication:—

A O U E I . . . H D T C Q . . . B L N S V . . . M G Ng Z R

The groups were then shifted into the alphabetic order of their first letters, but with the vowels at the end, as in the alphabet set forth on p. 214, *ante*. At some later date, but not before the system received its name *beith-luis-nion*, derived from the names of what were originally the three opening letters, the first group was re-arranged into the form in which we now find it, and in which it is always used in the inscriptions; interchanging N and V. The reason for this was doubtless the convenience of representing with the same number of scores the consonant V and the vowel U, which, in the Roman alphabet were indicated with the same symbol. Admittedly this was all learned trifling, but there is a temptation to these empty exercises when a man is inventing a device by which he may impose on his fellows.

[1] *Both* the words for "four" and "five" actually began at the time with the letter Q; but the Q-colour of the initial of the word for "five" was slightly more emphatic than in the word for "four," by reason of the vowel which followed it; so that our grammarian did not seriously violate phonetics when he differentiated the two, in the interests of his artificial scheme.

Literary Conditions at the Beginning of Christianity in Ireland

When Christianity began to take root in Ireland, the ordinary people spoke, as a colloquial, the difficult language which we call Old Irish; the language of the earliest MSS. This language was not at the time written down; indeed, it may be questioned whether it could have been written, in the orthographical conventions then current among the *literati*. It would be difficult to write French, for the first time, in Roman letters if our only association with these characters were the traditional pronunciation of Latin. The men of learning had cultivated a literary language with an orthography, accidence, and syntax quite unintelligible to the common people. Analogous difficulties present themselves to modern missionaries in various parts of the world. In China there is a large number of colloquial dialects, and a common literary language, the Mandarin dialect, unknown to the unlearned. There is a modern colloquial Arabic which every one, from the highest to the lowest, speaks, but which, if written, would look ridiculous to an eye accustomed to the literary tongue; the stately diction of the Ḳur'ān is used in writing, even in a familiar note to a near relation. An unlettered man can understand the literary language only very imperfectly; yet prayers, sermons, and other solemn utterances, if expressed in the colloquial, would sound as strange as if, among ourselves, they were expressed in the *argot* of the slums.

Modern missionaries in China have boldly thrown overboard the literary language,[1] and have elevated the various colloquial dialects to literary rank, by publishing translations and original works therein. The ancient ecclesiastics in Ireland did precisely the same thing. They introduced a new system of characters—the simple and easily formed cursive letters; and in them they wrote down for the first time what was then the colloquial language. This was accomplished with an ingenuity beyond all praise. The Irish language has had, at every stage of its development, an extremely copious and delicate phonetic system, over the representation of which a foreigner may easily come to grief—as we can see from trumpery modern attempts at inventing would-be phonetic or *soi-disant* simplified spellings; from the barbarous parodies of place-names on maps and on the notice-boards of railway-stations; and from the hideous method, or rather want of method, followed in writing the Manx dialect. The tradition

[1] This is expressed in an exaggerated way. It would be better to say, they have ignored its claim to be the *exclusive* literary language.

of spelling of which the Oghams are the record was completely abandoned, and a new system was introduced, which it is very instructive to study. The Ogham orthography has all the appearance of having been a spontaneous growth, developed by the native scholars; the manuscript tradition has all the signs of having been an artificial invention, the work of a learned grammarian, who had made almost as close a study of the phonetics of his language as the Indian grammarians had made of Sanskrit; and who was also acquainted with the Latin of his day, which supplied him with the letters of which he made use, and with hints for their proper treatment.

In endeavouring to write down the colloquial words, our grammarian invented certain diacritics, for the sake of clearness —marks to indicate the prolongation of vowels, the distinction between stopped and "aspirated" consonants, and the grammatical phenomenon of palatalization. He did not carry out the principles of his invention with the pedantic completeness of a modern phonetician; he contented himself with making clear, so far as he could, every word in which the pronunciation might be ambiguous.



FIG. 13.—The Kilmalkedar alphabet.

Books were too valuable to put into the hands of elementary learners. Alphabets in the new script were cut upon wood or on stone, or even baked in cakes, probably with a magical purpose. By eating the cake-alphabet, the learner, in the most literal sense of the term, "assimilated" its letters.[1] At the old church of Kilmalkedar (Kerry), there is a pillar-stone with a cross upon it on one face, and on the adjacent face the letters dn̄i, that is, *Domini* (for *Domine*). An alphabet has been added to this original design (see Fig. 13). The monument was an old tombstone, which some teacher took and turned into a permanent lesson-book for the use of successive generations of students. It will be seen that the letters have had to be accommodated to the previously existing "dn̄i".

[1] H. Gaidoz, *Les gateaux alphabetiques* (in "Recueil de travaux publies par l'Ecole pratique des Hautes Etudes, en memoire de son president Leo Renier," Paris 1886). He discusses the story of Cruithnechán, the teacher of St Colum Cille, who, according to the *Lives* of the latter, provided such a cake for his pupil. He misses the idea of magical assimilation, considering that it was merely an attempt to induce learning by making it a matter of play, like a modern child's alphabet blocks. Compare Horace, Sat. I i 25.

It will also be noted that the alphabet was intended for students of *Latin*, not of Irish; for it includes the letters of the Roman alphabet k, q, x, y, z, which are rejected by the Irish alphabet, as well as the abbreviation for *et*; an early instance of the old horn-book practice of adding this monogram to the alphabet.[1]

The new alphabet did not, however, altogether supersede the old at a stroke. There is, for instance, a distinct reminiscence of the older Roman capitals in the inscription on the well-known Inchagoill (Galway) pillar.[2]

The Creation of a Christian Literature

Having thus reduced the colloquial language to writing, the next step was to provide something to read. We must remember that one of the chief aims of the ecclesiastics was to break down the monopoly of the pagan men of learning. The best possible way to do this was to make their learning accessible to every one. Accordingly, they set themselves to create a new literature out of the old materials. They took the traditions of the learned men, and they translated them into the current speech. This was a staggering blow at the prerogatives of the *literati* of paganism.

In the process these venerable writings suffered modification —not always, we may be sure, for the better. The translators were not equally competent. Some of their productions must have been the merest "cribs". Much that is unintelligible in the existing literature may well be a bungled rendering by some inexpert scholar, who made nonsense of the ancient text before him. Besides these accidental deviations, intentional changes were introduced. As in all ancient literatures, the ancient documents doubtless contained much that was repugnant to Christian doctrine and Christian morals. To some extent these objectionable features were purged out: for which reason it is very difficult to find traces of the pagan faiths, even in sagas that essentially belong to the pagan period. The presence of details such as these in the pagan literature must have been an additional reason for discarding the literary language. In making available popular versions of the ancient literature, the translators modified passages that might have recalled the allegiance of their followers from their new-born Christian faith. The old gods, when they could not be wholly excluded from the narrative, were turned into heroes, with

[1] An ancient priest of the Isle of Man wrote a similar alphabet for teaching Runic and Ogham writing. See Kermode, *Manx Crosses* p. 214.

[2] Often illustrated: there is a very good picture in JRSAI xxxi p. 243.

the weaknesses of mere humanity. The grave and reverend druids were represented as vulgar jugglers and buffoons. Changes such as these are most likely to take place at the critical moment of a change of faith; when Christianity had conquered, and the old religions were merely a matter for antiquarian curiosity, the writers would not have troubled to make such expurgations: it is needless to kill dead gods. In this matter it is instructive to observe the contrast between the exuberant paganism of the Icelandic sagas and the suppressed paganism of those of Ireland, though both alike have come down to us, from the days of paganism, through the hands of Christian scribes.

The new literature was completely successful; the old, difficult literature, which had been an important source of the prestige of a literary caste, was killed; the archaic language which had been so jealously preserved and so assiduously studied was forgotten in a generation or two, as completely as was its sister tongue Gaulish. We may perhaps suspect its presence in the books of Longarad, "a master of learning, of law, of history, and of poetry," who, according to a well-known tradition, was so churlish as to hide away his books from St Colum Cille, when that eager student came to see him.[1] Colum Cille very naturally resented this; and he left a curse on the books that they might be of no profit after their owner. And the curse was fulfilled; for, we are told, "the books are still extant, but no man readeth them"—clearly not because they had become illegible, but because they were unintelligible.

Thus it comes to pass that the ancient literature, of which fragments remain to our time, though relating to remote events, cannot be dated earlier than the establishment of Christianity. But, on the other hand, it is possible to assume that behind the extant texts there were yet earlier documents, carrying back the literary testimony for several centuries. We can therefore attach a greater amount of credence to the historical information which they contain than would otherwise be permissible. When, in a late manuscript, we read definite statements about the doings of people who lived in the La Tène period, we are in a position to say that a chain of documentary tradition stretched behind the manuscript which is now our only authority, so long that the tale cannot be set aside as the mere invention of mediæval scribes. The names of ancient poets are on record, some of whom are alleged to have lived even in the first century A.D.;[2] and there is no

[1] *Martyrology of Oengus*, Henry Bradshaw Society pp. 198-9.
[2] A list of these names will be found in Kuno Meyer, *A Primer of Irish Metrics* (Dublin 1909).

reason why we should doubt their actual existence. We have direct evidence of the existence of one ancient poet, in the shape of his monument. This is the great Ogham-inscribed stone at Crag (Kerry), (Plate IV Fig. 2), which bears the epitaph LUGUTTI VELITAS, "Of Luguttos the Poet". We may roughly date this otherwise unknown bard to about the fourth or fifth century. His works are lost; but that he was accounted a man of renown may be inferred from the enormous size of the stone—about 12 feet in height—which was erected in his honour: the oldest, and possibly the greatest, memorial of a poet in the whole of Northern Europe.

Nowhere else but in Ireland do we find a literature that comes down to us right out of the heart of the La Tène period. But for Ireland, the works of art which that period has bequeathed to us would be lifeless and soulless. Ireland shews to us their living makers, and tells us something of what they did, and how they thought.

NOTE.—In the foregoing chapter I have adopted without discussion the theory of the origin of the Runic characters which seems to me the most probable. There are others, advocated by eminent scholars, which give a greater importance to the Greek alphabet; but this is not the place for controversy on the subject.

CHAPTER V

THE CONVERSION OF IRELAND TO CHRISTIANITY, AND THE EARLIEST CHURCH BUILDINGS

Pre-Patrician Christianity

THE conversion of Ireland to Christianity divides the history of the Celtic period into two parts. Of the first, comparatively few remains exist. We know less about Celtic pagan Ireland, notwithstanding the wealth of early literature directly or indirectly bearing upon it, than we do about the preceding Bronze Age. But the remains of the Christian period, to which we now turn our attention, are much richer, both in number and in artistic interest; to describe them exhaustively in a work of the size and scope of the present volume would be an impossibility.

The date of the advent of St Patrick, the chief apostle of Ireland, is A.D. 432; but Christianity had already penetrated into the country, and had become well established there, before he arrived. There are numerous traditions of pre-Patrician saints, which have unquestionably a historical basis, however much the germs of truth may have been overlaid with accretions of the marvellous. There were already "Scots who believed in Christ"—that is, Irish who believed in Christ, for the word "Scot" did not receive its present signification till long afterwards—when Palladius was sent to minister to them in the previous year: this we learn from a well-known and oft-quoted passage in the Ecclesiastical History of Prosper of Aquitaine. Christianity had reached Britain some two centuries before St Patrick's arrival in Ireland, and as there was doubtless no little intercourse between the two islands, new ideas would easily filter across the Irish Sea. Moreover, the direct traffic with Gaul, of which we have already spoken, opened another channel by which the New Faith could make its way. Merchants, slaves, and others, whom duty, business, or the force of circumstances compelled to travel, were each in his own way potential missionaries, who, as they followed their destined paths, sowed stray seeds which had some measure of fruition.

St Paul found in Ephesus a body of earnest but imperfectly-instructed Christians, to whom the very name of the Holy Spirit was unknown (*Acts of the Apostles* xix 1 ff.). He taught them more fully, and, so to speak, regularized their position in the Christian Church. These believers must have picked up their rudimentary Faith in some such casual way. But the pre-Patrician Christians of Ireland were something more than this. They had even succeeded in disturbing the whole Church with a heresy, thanks to that very remarkable man whose name, whatever it was, is Latinized "Pelagius". For the life of Pelagius, his opinions, and the influence which he exercised, we must refer the reader to special treatises on Ecclesiastical History. Most of what we know of him is derived from his adversaries; but with one conspicuous exception these are constrained to speak of him with respect. He irritated St Jerome by criticizing adversely one of his writings, and the latter made no attempt to conceal his resentment. When we find a Father of the Church stooping so low as to call his opponent "a blockhead with a paunch clogged with Irish porridge" and "a big fat Alpine cur"[1] we cannot but consider that, saint or no saint, he is shewing a very mundane bad temper, symptomatic of an uncomfortable feeling that some of his adversary's criticisms and opinions were not altogether easy to dispose of.

Jerome, in the second passage quoted, says definitely that Pelagius was "of Irish race, from the neighbourhood of Britain". He may be presumed to speak from knowledge, for he was living in Bethlehem at a time when Pelagius was in Jerusalem, only 5 miles off. The Irish origin of the heresiarch is however disputed, and some authorities prefer to consider him to have been a member of the Goidelic colonies in South Britain.[2] However that may be, there can be no doubt that his influence in Ireland was profound, and that Ireland did much to disseminate his opinions. It may well be that the leaders of the Church thought it advisable to send a mission to counteract his heretical teaching. It is suggestive that the mission of Palladius takes place almost immediately after the disappearance of Pelagius. It is especially to be noticed that neither Palladius nor his successor Patrick was sent as a missionary to the heathen in Ireland, but *ad Scottos in Christo credentes*.

[1] Hieronymus *in Hieremia*, Prologue, and Book III *ad. init.*

[2] See the whole subject discussed in Zimmer, *Pelagius in Irland* (Berlin 1901): the article on Pelagius in the *Encyclopædia Britannica* (11th ed.) with literature there quoted: Bury, *Life of St Patrick* (London 1905), references *sub voce* "Pelagius" in index.

St Patrick

Palladius made no great impression on the history of the country. Perhaps he died; in any case we hear nothing of him after the first year of his mission, and it was necessary to provide him with a successor. Patrick, who was chosen, possessed admirable qualifications for the work, counter-balancing the educational deficiencies which the circumstances of his early life made inevitable. His hard youth of servitude must have given him no small strength and power of endurance. He had a remarkable natural talent for organization: he was already well acquainted with the country, its political constitution, its geography, and its difficult language. His mission was remarkably successful, notwithstanding the pessimism of the *Confessio Patricii*. This document is obviously genuine —no other self-revelation in the world is more convincing: and its despondent tone is clearly due to exceptional mental distress under which the writer was labouring at the time of its composition.

It is a common mistake to imagine that Patrick single-handed extirpated paganism from the whole country, as he is said, in a frivolous pseudo-legend, to have banished serpents. Such a superhuman task would have been far beyond the powers of one man. Christianity and paganism had a severe struggle in Ireland, as in most other countries. The druids were not the people to give up their vested interests without fighting for them: although there is but little evidence that the seed of the Church was watered in Ireland with the blood of martyrs. Notwithstanding, the date of St Patrick's arrival as a missionary is *the* crucial date in early Irish history. Before that date the country was, as a whole, and officially, pagan: after that date it begins to be at least predominately Christian.

The change of Faith brought in its train a change of works. The arts became more and more associated with the service of the Church, and in consequence they entered into a new phase of development. This and the following chapters will accordingly be almost entirely devoted to the arts of the Church in their several manifestations—architecture, illumination, sculpture, and metal-work. The crafts of daily life, and the implements and utensils that ministered to them, were little if at all changed from those which characterised the earlier pagan period; and the descriptions of these that have already been given, in the third chapter, will serve equally well for the Period covered in the present and the following chapters. Indeed, many of the objects there described actually belong to the Christian period.

Architecture

Of the four arts enumerated above, architecture stands apart from the others. It depends for its effect rather on construction than on ornament: and the decoration of which it makes use is for the greater part derived from foreign sources. The other three arts are in reality branches of one art, using a common system of conventions and art motives; differing, indeed, in the medium of their expression only. In the present chapter we pay attention to the architecture of the early church in Ireland: in the next we consider the "common denominator" of the decorative arts—the system of conventions on which they are based: and in the chapter following we shall examine representative specimens of each of these arts in turn.

The pre-Patrician Christians must have used some kind of meeting-place for their rites; but of pre-Patrician churches in Ireland we know nothing. There is no building to which we can point as being of pre-Patrician origin, even in the places where, tradition assures us, pre-Patrician saints had established themselves. Nothing remains of the buildings of Ciarán at Seir-Kieran, of Declan at Ardmore, or of Ibar at Beg-Eire (Beggery Island, Wexford). It is not likely that their churches were anything more ambitious than wooden or wattle-and-mud oratories of the very simplest form. There is a curious story told of the discovery by St Patrick of a cave, containing an altar on which there were four glass chalices; [1] if we may accept this—and there is no apparent reason against doing so—it suggests that the earliest Christians sometimes used caves for their solemnities, and celebrated these with poor and makeshift instruments. The story is suggestive of poverty and persecution. But most likely when they did not worship thus, in remote valleys and caves—like their descendants in the days of the Penal Laws—they were permitted to meet in the hall of some wealthy adherent. In this they would have been exactly analogous to the Christians of the various centres around the Mediterranean Sea, where the Church was first organized.

This analogy is of very great importance, for it helps us to understand certain details in the early Church architecture of Ireland which would otherwise be unintelligible. After peace had been granted to the Church by the Edict of Milan, in A.D. 313, the *Basilica* was the model adopted for the large churches which it now became possible to build: but the plan of the secular basilica was modified by reminiscences of the

[1] *Vita Tripartita Patricii* i 94.

stages through which the Church had passed, during centuries when persecution was liable to break out. In those days, private houses, or the *scholæ* of clubs and friendly societies, had been used as makeshift churches; and the influence of the private house, and of the plan of the *schola*, can be clearly traced in the finished basilican Church plan.[1] In like manner, there are certain details in the early Irish church buildings that cannot be explained except by reference to the architecture of houses.

We must always bear in mind, in studying the early churches of Ireland, that *only the less important buildings have been preserved.* Stone construction was in a rudimentary state of development in the country till long after the introduction of the Christian Faith. Timber was plentiful and was easily worked. Undoubtedly all the large houses of the men of wealth were wooden erections; the only domestic buildings that have survived are poor huts of dry stone, erected in poverty-stricken stony districts. We have literary descriptions of quite elaborate houses—such as, for instance, the House of Bricriu, described at the beginning of the romance called the *Feast of Bricriu*[2]—which were written down at about the same time as these huts were built. If nothing better existed in the country at the time, the story-teller would have had nothing to stimulate his imagination in that particular direction.

The numerous burnings that the ancient monasteries suffered, according to the various volumes of Annals of Ireland which we possess,—catastrophes which do not appear to have seriously interrupted their corporate life—cannot be accounted for unless we presuppose buildings erected in material, which, if easily inflammable, was also easily replaceable. We infer that the small poor stone churches, which are the earliest surviving buildings associated with the worship of the Church, do not represent the highest attainments of the ancient architects.

But in this we are not left wholly to inference. There is an eighth-century life of St Brigid in existence, written by an author who hides his personality under the Latinized name "Cogitosus". In this document a story is told of a miracle which took place in the church of that saint at Kildare. And, most happily, the author begins his narrative with a description of the building in connexion with which the miracle was

[1] On this subject, for full details consult G. Baldwin Brown, *From Schola to Cathedral* (Edinburgh 1896).

[2] Irish Texts Society vol. ii.

said to have taken place. Here follows a translation of this description :—[1]

"I must not be silent concerning the miracle at the restoration of the church in which rest the glorious bodies of bishop Conlaeth and the virgin saint Brigid, on the right and left of the decorated altar, deposited in monuments decorated with various embellishments of gold and silver and precious stones, with crowns of gold and silver hung above them. For, owing to the increase in the number of the Faithful, and their being of both sexes, the church occupied a wide area and was raised to a towering height, and was adorned with painted pictures. It had within three spacious oratories, separated by plank partitions, under the one roof of the greater house, wherein one partition, decorated and painted with figures, and covered with linen hangings, extended along the breadth of the eastern part of the church from one wall of the church to the other. Which partition has at its ends two doors. Through the one door, placed on the right-hand side, the chief bishop enters the sanctuary accompanied by his regular school, and by those who are appointed to the holy ministry of offering sacred and dominical sacrifices. Through the other door, placed in the left-hand part of the aforesaid cross wall, enter the abbess with her virgins and faithful widows to enjoy the feast of the body and blood of Jesus Christ. Moreover, another wall separates the floor of the house into two equal parts, stretching from the eastward part to the cross wall. The church has in it many windows, and one ornamental doorway on the right-hand side by which the priests and the faithful of the male sex enter the church, and another doorway on the left by which the assembly of virgins and faithful women are wont to enter. Thus in one very great temple a multitude of people in different order and ranks, separated by partitions, but of one mind, worship Almighty God."

The passage then goes on to tell how an ill-fitting door was miraculously made to accord with the opening prepared for its reception. This part of the story does not concern us. The interest for us lies in the fact that we have here the description of a large church, such as the author could scarcely have conceived in his mind unless he had actual knowledge of such a structure. It must be confessed that his description is not so clear as we should have wished ; it is a mere impression ; but as such, it is much more likely to be a description of a building which the author had seen and had half remembered, than that of one which he had figured in his imagination. In the latter case, he would have unconsciously endeavoured to give verisimilitude to his story by a more exact specification. The passage is a testimony to the existence in eighth-century Ireland of large churches, doubtless of wood, enriched with hangings and with other applied ornament to an extent for which the bare walls of the roofless oratories would hardly have prepared us.

England has preserved one church building in wood, at

[1] The original Latin text will be found in Colgan, *Trias Thaumaturga* p. 523.

Greenstead, near Chipping Ongar, in Essex; it belongs to the Saxon period. Ireland has no such relic to shew, but there is further literary evidence of the use of wood in these structures. Of St Ciarán of Seir, whom we mentioned a moment ago, it is related that when he was about to build his church a boar brought the necessary wattles and rods to him, biting them off with his teeth.[1] We need not trouble about the inherent improbability of the story: though we may grant it freely, we are still left with a clear understanding between the hagiographer and his readers that rods and wattles were needed for church buildings. In like manner Coemhghen (Kevin) of Glendaloch built for himself a little oratory *ex uirgis*, "of rods".[2] Bede records the erection of a church at Lindisfarne, "not of stone but of hewn oak, after the manner of the Scots" (i.e. the Irish).[3] Tirechán tells us of St Patrick building a church of earth, "because there was no wood hard by".[4] A hundred horse-loads of peeled rods went to the erection of Brigid's cell at Kildare:[5] and we learn from St Bernard's Life of Mael m' Aedhóg ["Malachy"] ua Morgair, Archbishop of Armagh (ob. 1148) that the archbishop's beginning of a stone church at Bangor (Down) was made the occasion of a demonstration by one who had a grudge against him, and who sought to inflame public opinion against him as an innovator.[6] The word *fighim*, "I weave"—a natural word to apply to the erection of a building of palisades and wattle-work—is used for the construction of a fortress.[7]

The ancient wooden churches of Norway survive to teach us that a building of wood can be of the greatest interest, both constructionally and artistically. The Irish sculptors who displayed such skill in carving ornamental devices in stone could not fail to have been at least equally skilful in dealing with a much more tractable material like wood: and we may quite reasonably picture Ireland as having been dotted with wooden churches of no little beauty of form and decoration. In comparison with those vanished buildings, those in stone, which survive in part, would probably have seemed to their contemporaries mere trivialities; though to us they are precious relics beyond estimation. To these it is now time to turn.

[1] O'Grady, *Silua Gadelica* i p. 3.

[2] *Acta Sanctorum*, June, vol. i p. 316.

[3] *Hist. Eccl.* iii 25.

[4] *Vita Tripartita Patricii* ii 327.

[5] *Lismore Lives of Saints*, line 1570.

[6] See Lawlor's translation (S.P.C.K.) p. 108 ff. See also p. 32 of the same work, and the footnote there.

[7] See, for instance, Gwynn's *Dind shenc hus* (R.I.A. Todd Lecture Series, vol. vii) p. 42 line 8.

Classification of Stone Churches

In studying the early stone churches we are faced at the outset with the difficult problem of chronology. There is very little that is distinctive in these plain buildings to enable us to assign them to their proper century. The early students of the subject, notably George Petrie, proceeded on the assumption that a church mentioned in the volumes of Annals was to be identified without further question with any actual building that might be found on the same site. They never considered the possibility of rebuilding having taken place; in consequence dates far too early were assigned to some of the buildings with which they dealt.

We may classify the early church buildings into three groups, which we may call *Primitive, Transitional,* and *Romanesque* respectively. It is probable that on the whole this classification is also chronological; but it cannot be accepted as absolutely so. We must not assume that a Primitive building in a backward part of the country is necessarily older than a Romanesque building in a more favoured situation. Only a few churches of any period can receive special mention here. A large number are made the subject of special monographs in the journals of societies. See also A. Champneys, *Irish Ecclesiastical Architecture* (London, 1910), which contains a large number of photographic illustrations, including many of the buildings and details referred to in this chapter and in Chapter VIII.

Primitive Churches

The chief characteristic of the Primitive style is the absence of the arch construction; doors and windows being spanned with lintels. There is no evidence for any knowledge of the arch in buildings of the Pagan period; but on the other hand, we cannot assume that the arch was actually *unknown* when "Primitive" churches were being erected. It is noteworthy that the soffits of the lintels over the smaller window-openings are generally scooped out as though to imitate an arch form, even in structures that shew no sign of the constructional use of the arch. This would seem to indicate that the builders were familiar with the appearance presented by an arch, even though they did not choose to make use of it. The number of Primitive churches which do not thus display the influence of a more advanced style of construction is very small indeed.

A striking case in point is the structure called *Gall-arus* near Dingle (Kerry). This name seems to mean "foreign

house," and it may well have been applied to a church of novel construction by people who, like the opponent of the archbishop just mentioned, were accustomed to wooden houses. Its chief constructional peculiarity lies in this, that it is not derived from the wooden house which, as we shall see, was the prototype of most of the church buildings of its time, but from the *clochán* or stone bee-hive hut.

A clochán was built in this manner. A space of the size and shape intended was marked out on the ground with loose stones. Usually the plan was circular or oval, but sometimes the building is circular outside and square within.[1] Above these stones another course was laid, slightly oversailing the course below. A third course overhung the second, and so on; the walls being made thick enough, as they rose, to secure stability. At last the sides of the building approximated together so that the hole in the top of the chamber could be closed with a single flag-stone, or with two or more such stones placed side by side, spanning the space as lintels. No mortar of any kind was needed or used, though the outer surface may have been covered with sods or some such protection, to keep out the rain. In a clochán on the isolated rock called Skellig Michael (Kerry) there are stones projecting from the outer surface of the wall at intervals, apparently to support a covering of the kind. As a rule the stones of which the building was composed were laid not quite horizontal, but were sloped outward, so as to shed off rain-water to the outside of the building.[2] (See Plate V.)

Gall-arus is constructed in this way, save that it is built on a rectangular, not a circular base, so that instead of presenting a bee-hive appearance it looks like an upturned boat. It has been constructed with great skill. The builders of Gall-arus were well practised in dry-stone work; though there is not a particle of mortar in the building, every stone is exactly where the builders left it, with the exception of some parts of the roof-cresting, which have fallen. The door is at the west end. It is lintelled; the lintel is double for extra strength—the upper lintel relieves the lower of the weight of the superincumbent masonry. The jambs are not vertical, but slope inward. This slope was primarily intended to reduce the width of the span of the opening, so that a smaller lintel-stone could be used, and a shorter length left unsupported. But in time it became a mere convention, and continued in use even

[1] As in a clochán on Church Island (Kerry).

[2] Probably the largest number of buildings of this kind is to be seen in the so-called "City of Fahan," described by the present writer in TRIA xxxi p. 209. Structures of the kind are still erected by the country folk of Kerry on the ancient model, to serve as outhouses of various kinds.



FIG. 1—EXTERIOR OF A CLOCHÁN ON ARAN IS., CO. GALWAY

FIG. 2—INTERIOR OF SAME

after the general introduction of the arch rendered it unnecessary. Remains of the door-hanging on the inner face of the entrance have suggested to some writers that the door was hinged from the top. Lord Dunraven gives us a restoration of the doorway based upon this interpretation of the evidence.[1] The drawing irresistibly suggests a mouse-trap! Such a method of closing the building would be very unlikely; it would have no advantage in security over a door hung in the ordinary way on a side jamb, and would be very apt to cause painful, if not actually dangerous, accidents. Most likely the hangings supported nothing more solid than a curtain. On the other hand, it is probable that a priestly guardian remained within the building, charged with the duty of protecting it from violation. When there is evidence remaining of the fastenings of church doorways, these shew that the door was secured from within: it follows that some one must have dwelt permanently inside the structure. Indeed, in some later churches, apartments for the accommodation of such a guardian are constructed at the west end. Conceivably the Gall-arus doorway could be closed by means of a wooden movable screen, with two projecting horns at the upper ends to be thrust into the holes in the projecting brackets, and secured along its lower edge by heavy stones. Such a barrier, in view of the narrowness of the doorway, would be difficult to carry by assault. But a fixed hanging doorway, swinging vertically, is hardly credible.

At the east end there is a small window-opening, the top of which, constructionally, is a rudimentary arch. It is formed of two stones, each carved with one-half of an arch-opening on the soffit. It follows that when Gall-arus was erected, the appearance of an arch was known in Ireland; the building cannot, therefore, be of the very remote antiquity which has been claimed for it. It is not likely to be older than the seventh century at furthest.[2]

Near Kilmalkedar in the same neighbourhood there are the ruins of a similar oratory, differing however in that the gable-ends slope as well as the sides, and that the window-opening is of a true lintel construction.[3] There is another structure of the same kind at Ballinskelligs Bay (Kerry).[4]

[1] JKAS viii pp. 30, 31, *Notes on Irish Architecture* I p. 60.

[2] In a paper on "Kilmalkedar" (JRHAAI x p. 560), Mr. A. Hill argues for a yet later date (not anterior to A.D. 1000). Against this see Rev. T. Olden, "The oratory of Gallerus," PRIA xix p. 564. Further literature on the subject of this important building will be found in JKAS viii pp. 30, 31; JRSAI xxi p. 619; xxii p. 271; xxvii p. 297 ff.; Dunraven, *op. cit.* I p. 59.

[3] G. V. du Noyer, "Notes on some peculiarities in ancient Irish ecclesiastical structures," JKAS viii p. 27; Dunraven, *op. cit.* I p. 58.

[4] P. J. Lynch, "Antiquities around Ballinskelligs Bay, Co. Kerry," JRSAI xxxii p. 57.

The very primitive little oratory called *Teach Molaise*, on the island called Inismurray in Sligo Bay, is another good illustration of the same principle—the underlying acquaintance with the arch, even when an arch is not constructionally used. A ruder and simpler building could hardly be conceived: the entrance is spanned with a lintel; the east window, which is of very small size, is also lintelled, but the lintel is cut out to imitate an arch.

At the time when the Primitive churches were being built, the islands around the coasts of Ireland and upon her inland lakes afforded a retreat from the noisy world for those who wished to lead a life of contemplation, devotion, or study. It is also quite likely that these islands had been sanctuaries of the older faiths, and that monasteries were erected upon them in order to re-consecrate them. This was undoubtedly the case of the island just mentioned. The traditions of the church called *Teampull ne Teinidh*, "the Church of the Fire," are clearly pagan.[1]

Of all the island monasteries, none is more remarkable than that on the lonely rock of Skellig Michael, off the Kerry coast. This is one of two rocks that rise abruptly from the depth of the sea. The larger, which bears the monastery, is a cone about 700 feet in height above sea-level. Very little is known of the history of its settlement; but it was in existence in the ninth century, and was probably founded, as a monastery, some two or three centuries previously. (See Plate VI.)

The old approach to the monastery was by a flight of rude steps, more than 600 in number, running up the cliff from the sea. (See Frontispiece.) The lower part of this ascent has been ruthlessly destroyed by modern utilitarianism, its place being taken by a road leading up to the lighthouse. We ascend this for some distance, and then follow the ancient staircase, which conducts us to a *col* named "Christ's saddle," between the main summit and a subsidiary peak. This col is 422 feet above sea-level. From here there is a continuation of the stairway up the edge of the cliff, and through a cleft, to the eastern peak. At last we arrive at the little platform upon which the monastery stands. There are five bee-hive huts, built in the manner described above, and two small oratories; all included within a wall, the outer face of which is flush with the precipice that drops a sheer height of 600 feet to the sea.

[1] See W. F. Wakeman, *Survey of the Antiquarian Remains on the Island of Inismurray*, p. 51 ff.: Dunraven, *op. cit.* I p. 45. On the general subject of the re-consecration of pagan sites to Christianity, see Rev. J. O'Laverty, "Notes on pagan monuments in the immediate vicinity of ancient churches," JRHAAI xv p. 103.

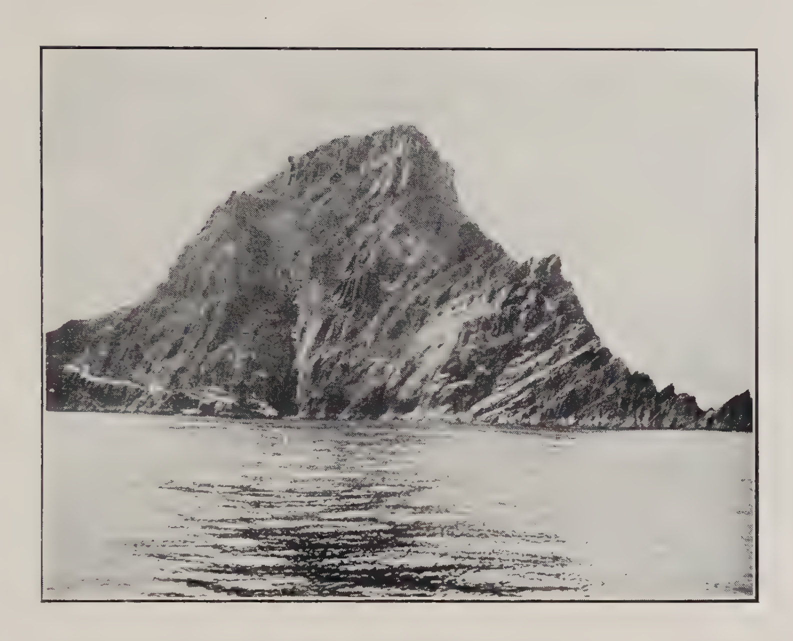


FIG. I—SKELLIG MICHAEL, CO. KERRY

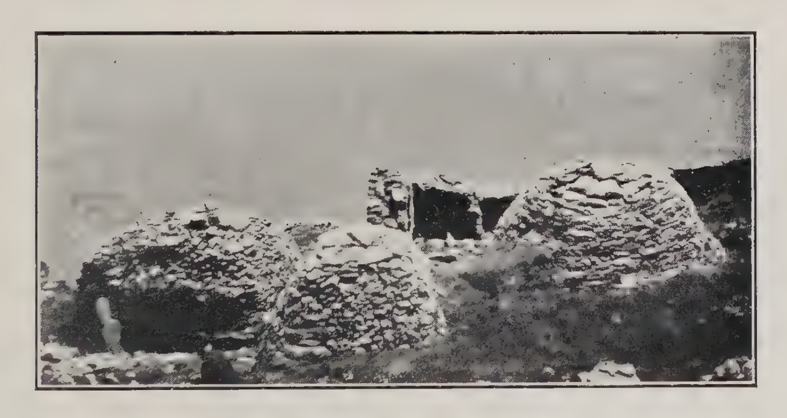


FIG. 2—THE MONASTIC CELLS, SKELLIG MICHAEL

The ascent to the summit of the greater peak of the rock is a feat not to be lightly undertaken. The climber must first squeeze through a hole in the rock like a chimney-shaft, called "the Needle's Eye". This leads to a narrow ridge sloping down to a precipice on each side, at the end of which there is a rock about 12 feet high. This is surmounted by means of shallow holes, cut for hands and feet: a slip would mean a fall on to the isthmus, and a more than probable rebound into the sea, nearly 700 feet below. After surmounting this rock the rest of the way is not difficult, save that we are troubled by the knowledge that sooner or later we must get back! At the extreme top of the peak there is a spindle of rock projecting out horizontally for several feet over the sea. Some adventurer has worked his way along this projection, and has cut a cross at the end of it.[1]

The Aran Islands contain a number of churches, which most nearly approximate to the "Primitive" style of any in the country; yet in most of them a curved window-head, even when carved out of a single stone, shew that the time of their construction overlaps with a knowledge of the arch. Most noteworthy of these is the church on the hill-side above the village of Killeany called *Teampull Beanáin*, which by a miracle escaped the all but total destruction that befell the other ancient church buildings and the carved crosses at this place, at the hands of the Cromwellian garrison which for a time was here quartered. Teampull Beanáin has various peculiarities. In the first place, it is unique among the ancient churches in Ireland in that it stands with its long axis north and south. There is nothing in the site to account for this inexplicable anomaly. The door, which faces north, is extremely narrow; and it has been heightened by cutting a square section out of the soffit of the lintel. The stones in the masonry are very large; nearly half of one side of the building consists of a single stone. The gables are of extraordinarily high pitch; lofty roofs of this kind are a constant feature of the Primitive structures—so much so that an exception, as at Killeevy (Armagh) is noticeable—but in the present case the steepness of the pitch is quite beyond what is usual. There is but one window, which is at the end of the eastern side, not (as is more commonly the case) in the end wall. The oratory is so tiny that it would be impossible to squeeze more than about twenty people into it: doubtless those of the laity who attended Mass at such a building would remain outside.[2] (Plate VII Fig. 1.)

[1] See G. T. Stokes, "The Island Monasteries of Wales and Ireland" [with view of Skellig], JRSAI xxi p. 658: also details in JRSAI xxii p. 277; xxvii pp. 269, 308: Dunraven, *op. cit.* I p. 26.

[2] *Ibid.* p. 70.

Close to this building there is a curious structure of dry stones, consisting of a number of bee-hive shaped cells massed together inside a rectangular outer wall. This was apparently some sort of hermitage where those who ministered in the oratory resided; but it is so ruined that its plan cannot be completely determined. We may perhaps compare the famous "St Kevin's Bed," a cave in the face of the cliff above one of the oldest church foundations at Glendaloch; or a pair of rock-cut cells apparently for anchorites, at Kilcoo (Fermanach), described rather summarily by Wakeman.[1]

Our Lady's Church, at Glendaloch, is a Primitive church of rather larger size.[2] Its plan, as in all the Primitive churches, is a simple rectangle; there is no distinction of nave and chancel. The doorway is, as usual, at the west end; it is lintelled, and the jambs incline slightly. There is a saltire cross cut upon the soffit of the lintel. The east window, however, has a true arch, which, moreover, is decorated with simple Romanesque ornament. It is perhaps an insertion: but it is a warning that in the present very imperfect state of our knowledge of the history of early Church architecture in Ireland, it is possible to be over-dogmatic on the subject of dates and styles. The masonry of this church is especially perplexing. The lower courses are built of large well-squared stones, resembling the masonry of Teampull Beanáin. Above this there is a section of masonry more careless in style, and built of smaller stones. Higher up there is, in the top gable, a very roughly built section that has the appearance of having been cheaply and rapidly run up for a necessary repair. The stones are scarcely more than hammer-dressed.

Within one building, uniformity of masonry is, generally speaking, an indication of a single date for the entire structure. But, owing to the wide range of variation in the local conditions, it is impossible to establish a criterion for dating, based upon differentiation of masonry, that shall hold good over the whole country. The character of the masonry depends more upon the nature of the stone available, and on the technical skill of the local masons, than upon the century in which the building happened to be erected. On the other hand, when a building shews different styles of masonry in different parts of the structure, we are justified in suspecting rebuilding or addition. There are striking examples at *Teampull Mhic Duach*, on the great Aran Island,[3] where a comparatively late chancel has been added to a Primitive church, so that the original building becomes the nave: at Clara, near Kilkenny, where

[1] W. F. Wakeman, "Kilcoo," JRHAAI xv at p. 34.
[2] Dunraven, *op. cit.* I p. 101. [3] *Ibid.* p. 75.



FIG. 1—TEAMPULL BEANÁIN, ARAN IS.



FIG. 2—KILLINNY CHURCH, CO. GALWAY

contrariwise a late nave has been added to a Primitive chancel; at Killinny (Galway), where a very small Primitive church has been enlarged by an addition at the side, so that the ancient gable-end remains undisturbed and contrasts most instructively with the rough additional masonry; and at many other places, too numerous to mention here. (Plate VII Fig. 2.)

But when the masonry changes, so to speak, in a vertical section, the case is not so easily dealt with. The church which we have been describing may have been partially demolished and rebuilt as many times as there are changes in the masonry. But it may also mean that the builders shirked the trouble of raising large stones to the upper courses in the walls.

There are many other churches of the primitive style which deserve description, but for which we can find no space here; once more we encounter the pressing necessity, which meets us at every turn, of a proper archæological survey of the country. For the present we must be content with referring the reader to numerous separate monographs contained in the journals of societies, and especially to Lord Dunraven's sumptuous publication, *Notes on Irish Architecture*.[1]

The church of Cruach Mhic Dara, a small island off the Galway coast, introduces us to some further details of great importance.[2] It is a small building, on the usual rectangular plan—it may be said, once for all, that there is no such thing as an apse in any ancient church building in Ireland. The doorway has sloping jambs and is lintelled; and there is one very small window. The roof is high-pitched; part of its stone covering still remains.

So far, this building is identical in appearance with those which have already been described. But in addition it has two pilasters at each gable-end, running up the corners—or, to put the fact in another and perhaps clearer way, the side walls appear to project some little distance beyond the face of the gable. Such pilasters are a frequent characteristic of the Primitive churches of Ireland; in the present case alone, they are also carried up along the edge of the high-pitched roof. In all other examples they stop at the bottom of the sloping part of the side of the gable.

These corner pilasters are a clear reminiscence of the timber construction from which the early churches were derived, and

[1] A new edition of this work, in a more manageable size, with the letterpress brought up to date, and with permanent collotypes substituted for the perishable silver-prints which form the illustrative plates, would be of great service to Irish archæology. The photographs are in many cases of the highest importance, as they preserve the appearance of some buildings which have since been spoiled by meddlesome "restoration".

[2] Described by F. J. Bigger in JRSAI xxvi p. 282.

they can be explained in no other way. They are translations into stone of the heavy corner posts of wood, which supported the timber framework that sustained the roof.

In such a house as might have formed the prototype of one of the early church buildings, the walls were formed of wattle-work, intertwined upon small upright posts, and covered with mud, or, perhaps in the more sumptuous houses, with planks. At each corner there were heavy upright posts—we possess references in literature to the erection of the corner-posts as the first step toward the construction of a building—which supported beams running along the tops of the side walls. These wall-plates received the feet of the roof-rafters. The wall-plate projected a little beyond the gable, and was probably ornamented on the ends with carving. Along the sides of the gable ran the principals—two large sloping beams, which, meeting at the top, were " halved " into one another, and formed an X-shaped cross at the top; this might also be ornamentally treated. In the fork of this cross was laid the roof ridge-piece, on which the upper ends of the rafters rested. These rafters supported boards, upon which wooden shingles were nailed. There is reason to believe that these shingles were painted with variegated colours: poets compare them to the painted plumage of birds' wings, a simile that has led prosaic commentators to ideas as erroneous as they are impossible about the nature of the thatch of early Irish houses. A king-post prevented the collapse of the roof, such as might otherwise have been produced by the downward thrust of the weight.

In contemplating such a structure, the features that would command attention would be the massive corner posts, the projection of the wall-plates, and the crossing of the principals at the roof-ridge. The first of these is represented by the corner pilasters of the early churches. The other two features are also often reproduced.

In certain churches—a good example is Holy Trinity Church, Glendaloch,[1] although this is rather of the Transitional style than the Primitive—there is what is known as a *corner bracket*—a stone projecting horizontally from the end of the church, just at the place where the slope of the gable-end meets the upright side wall. In a complete church there ought to be four such brackets, two at each end, but they are not all present in every case. These brackets cannot be intended for supporting anything (such as a statue) for a burden of the kind would have been exposed to the wind, and in this stormy country it would

[1] See Dunraven, *op. cit.* I p. 98.

have been blown down before a month was passed. Some have sought a recondite and meaningless symbolic explanation, such as that the brackets were intended to represent the poles whereby the Hebrew priests bore the Ark of the Covenant. It is true, the Church is frequently symbolized by the Ark; but it is the Ark of Noah, which was quite a different object, and in Hebrew has quite a different name, although the English language has decreed that the same unusual name should be used for both. The explanation of the corner brackets becomes simple and obvious when we look back from the stone church to the wooden prototype; they are simply the decorative projecting ends of the wall-plates.

The crossing of the principals is likewise translated into stone in the shape of a very characteristic ornament of the early churches, the *winged finial*. This is a disc of stone resembling in outline the two upper wings of a butterfly, spread out, usually with a notch between them where the head of the insect would be. This ornament is also found on the church-like shrines, to be described in a later chapter, and in the models of churches that form the upper members of the High Crosses, as well as in representations of buildings in manuscripts. There can be very little doubt that this peculiar ornament, which crowns the summit of the gable of many buildings, is a representation of the crossing of the gable-beams. The shape of the winged finial suggests that the beams were carved so as to represent two animals' heads, facing one another, as is still sometimes to be seen in country houses in Germany.[1]

Transitional Churches

The Transitional type of church buildings is marked by the use of the arch constructionally, at first applied only to the smaller openings. An interesting case is at Clonamery (Kilkenny).[2] Here there is a church with the chief primitive characteristics; a lintelled doorway and corner pilasters. But, instead of the second lintel above the doorway, such as we see at Gall-arus, there is here a relieving-arch. It is noteworthy that there is a "vestigial relic" of the second lintel, in the shape of a large square stone above the doorway, acting as a kind of rudimentary tympanum. This stone, so far from being a strength to the construction, is a source of weakness, in that it bears directly upon the unsupported part of the lintel.

[1] See examples illustrated in *Folk-lore* xi p. 322. For a collection of drawings of Irish winged finials, see H. S. Crawford, "Finial-stones," JRSAI xliv p. 171. See also JRHAAI xviii p. 252.

[2] Dunraven, *op. cit.* I p. 111.

Many other churches, shewing a simultaneous use of lintel and arch construction might be enumerated ; they could probably be found in every county. Sometimes the door is lintelled and the window or windows arched : sometimes there is a lintelled doorway, but a well-built chancel arch : indeed, every possible combination might be exemplified from among the extant instances.

The " false arch," with horizontal joints, which lies at the foundation of the *clochán* construction above described, was superseded when the use of the true arch with radiating voussoirs came into general use. An intermediate example may be seen in the vaulted roof of the church popularly called " St Kevin's Kitchen " at Glendaloch. The lower part of the arch of this roof has horizontal joints ; the upper part has radiating voussoirs. But, as in the Primitive structures, the arch is sometimes suggested without being actually constructed. Sometimes it is cut out of a single stone, sometimes out of two, as at Banacher (Derry).[1] The great doorway of this church is a fine structure in which we may say that the lintel construction reaches its highest point. Machera, in the same county, possesses a similar doorway, which bears a sculptured representation of the Crucifixion with other ornament, in the style, and doubtless of the date, of the High Crosses.[2]

As a rule there is but little carving in the stone work of pre-Romanesque churches. Sometimes, as in the lintelled doorway of Fore (Westmeath), a cross, plain or slightly ornamented, is carved on the lintel. Frequently a human head is carved on one of the stones ; but rarely is anything elaborate to be found. We may, perhaps, mention in passing the carved holy-water stoup in the otherwise perfectly plain church of Ucht Mama (Clare) : this bears two intertwined animal figures. Not impossibly these otherwise plain churches were more or less richly decorated with applied ornament—painted plaster, embroidery, metal-work, lamps, and the like : such decoration is suggested by the old description of the Kildare church, quoted on a previous page. On the other hand, it must not be forgotten that owing to the smallness of the windows these buildings, when roofed, must have been almost as dark as sepulchral vaults.

It should be mentioned that there is no evidence that the windows of the early churches were glazed. The openings were

[1] See an excellent illustration in JRSAI xlv p. 235 : also Dunraven, *op. cit.* I p. 112.

[2] A poor drawing of this doorway will be found in Miss Stokes' *Early Christian Art in Ireland* (South Kensington Handbooks). The doorway is very awkwardly placed for photography, and no satisfactory illustration of it has been published.

in some cases protected with wooden shutters, which turned upon horns or pivots—the sockets for the pivots are often to be seen. But these would normally be open, for which reason the windows were made as small as possible. A few fragments of window-glass were found in Ardtole Church (Down), but they are not earlier than the fourteenth century.[1]

The word " Cyclopean " is happily disappearing from writings upon Irish architecture, but it may not be amiss to endeavour to accelerate its departure with a word of animadversion. People sometimes call the lintelled doorway at Fore, above-mentioned, " Cyclopean," seemingly with a vague idea that the word means " built of large stones ". The real meaning of the word is " so devoid of history that folklore has assigned its construction to the Cyclops ". As a technical term applied to a certain phase of Greek primitive masonry the word is absurd enough ; as applied to any Irish structure it is grotesque, especially as the type of masonry to which it was originally assigned is entirely different from the Irish masonry to which it is transferred.

A notable peculiarity of early Irish ecclesiastical establishments is the multiplication of small church buildings. At Glendaloch, Ucht Mama,[2] Clonmacnois,[3] Kilmacduach,[4] Inis Cealtra,[5] and elsewhere there are to be found within one and the same enclosure, a number of independent churches, most of them of small size. There may be any number of these ; at some places there are two or three, at others as many as thirteen. One number which, as it happens, is *never* found is *seven :* notwithstanding this, such groups frequently bear the popular name " The Seven Churches," with the ridiculous assumption that the Seven Churches of the Apocalypse are thereby represented in symbol. Such a symbolism would be quite pointless in any case : and even if there were any conceivable reason why the church builders should affect it, the non-existence of any actual group of seven churches, and the fact that the component elements of the groups are sometimes not churches at all but domestic buildings,[6] and that they were obviously built at different times, would be enough to shew that it never entered their heads to do so.

[1] JRSAI xlvi p. 133 ; xlvii p. 183. [2] Dunraven, *op. cit.* p. 102.

[3] Described by R. A. S. Macalister, *Clonmacnois Memorial Slabs* (Dublin 1909) p. 141 ff.

[4] Described by Very Rev. J. Fahey and Dr. R. Cochrane, JRSAI xxxiv pp. 220, 234.

[5] See R. A. S. Macalister, " The History and Antiquities of Inis Cealtra," PRIA xxxiii p. 93.

[6] As at Onacht, Aran (Dunraven, *op. cit.* I p. 89) : at Inis Cealtra a ruined modern cottage has been pressed into the service to make up the tale of seven buildings.

To understand the real meaning of these groups of buildings, we have only to think of a mediæval cathedral or large collegiate church, with its complication of chantry chapels, each containing an altar. Now, imagine the unity of such a building to be dissolved, so that each of these chapels becomes a separate church: we shall then find ourselves with a group of churches such as is presented by the Irish monastic sites. Each "church" is essentially a chantry chapel, founded by some benefactor of the establishment.

The small size of the early Irish churches has frequently been commented upon; we all remember how Thackeray, in his *Irish Sketch-book*, waxes merry over the miniature cathedral at Glendaloch. But it must always be remembered that the stone buildings, which survive, were in all likelihood the smaller and the poorer structures; and further, that the provision of a building for the reception of the laity as well as the clergy was not necessarily contemplated by the builders. In a large number of cases the people attending Mass remained *outside the building*, as may still frequently be seen in the country parts of Ireland. That this was an ancient custom is shewn by a remarkable story.

In the *Annals of Ulster*, under the year 748, we read that "ships, with their crews, were seen in the air over Clonmacnois". This was doubtless a mirage; a similar phenomenon was seen over Tipperary on 2 March, 167$\frac{8}{9}$, and to judge from a rare contemporary account,[1] caused no little excitement. The tale of the earlier apparition was handed down through the centuries, and did not lose in the telling: at last it reached Norway, and there appears in the twelfth-century *Kongs-skuggsjá*, or "Royal Mirror," a book for the guidance of youth in various departments of life. In a section on "the wonders of Ireland" we find the story of the mirage, which has now grown to this: that when the people were at Mass at "Kloena" (Cluain) a ship was seen sailing overhead. It dropped an anchor, which caught on the church door. A man descended from the ship, swimming through the air, to loosen the anchor. The people ran out of church, and came forward to seize the man; but the bishop, who was presiding at the Mass, forbade them to seize him, as he would be drowned. So they let him go; the rope was cut and the ship sailed away. The anchor long remained at Clonmacnois as a witness to the truth of the tale.[2] Although the Norse narrator describes the people as coming out of the church, it is clear that the arrival of the ship would

[1] Reprinted in JRHAAI xv p. 273.
[2] *Kongs-skuggjá*, ed. 1768, p. 115; Kuno Meyer, "The Irish Mirabilia in the Norse 'Speculum Regale,'" *Eriu* iv p. 12.

not have been seen, had not some of them, at least, been already outside when it came.

The double roof of the main portion of "St Kevin's Kitchen" is an example of an ingenious mode of construction which seems to have been a native Irish invention. It is also found in the ancient chapel in the cathedral churchyard of Killaloe, in St Colum Cille's house at Kells, in Cormac's chapel at Cashel, and in one or two other buildings. It was a device for obtaining a high-pitched sloping roof, such as a rainy climate required, without running the risk of the thrust of the roof pressing the walls outward and so bringing the whole structure to ruin. After the side walls were erected, a centering of timber was constructed, forming a vault, the extrados of which was covered with timber planking or of brushwood. Upon this centering a stone vault was constructed, and well grouted with liquid mortar, which ran through the joints and accumulated above the brushwood of which it retained an impression. (There is a fine example of this in the sacristy vault of Clonfert Cathedral.) When the mortar was thoroughly set, the centering was removed: the result was that the church was covered in, as it were, with a solid lid, with flat top and with a vaulted under side. On the upper surface of this "lid" the sloping roof was erected. There was, in consequence, no outward thrust at all; all the weight of the roof pressed vertically downward; a building of no inconsiderable size could thus be set up without any buttresses. A chamber was formed in the roof, which could be reached with a ladder through an opening left in the vault.

Professor Baldwin Brown has studied the mechanics of this form of roof,[1] and concludes with these words: "Though they have in most cases been considerably restored in recent times, their vaults seem to have remained firm, and have not been reconstructed, while in no case has any buttressing of the external walls become a necessity. This fact reflects no little credit on the ancient Irish mason, who not only evolved a novel scheme of construction, but carried it out with perfect success into practice."

Romanesque Churches

The full acceptance of the arch construction as we find it —though still perfectly plain—at Holy Trinity Church, Glendaloch, leads us on to the third group, with its more ornate buildings.

[1] In a series of articles on "The Ancient Architecture of Ireland" (*The Builder*, running serially from 18 Sep. to 6 Nov. 1897). The special reference here is to p. 298 of the number for 16 October 1897.

It is impossible here to enter into the general history of Romanesque architecture, and of the varieties of the style as we find it in different regions. Suffice it to say that it is a product of the historical conditions prevailing in Europe in the centuries immediately following the sack of Rome in A.D. 409. This event brought the Teutonic peoples of Central and Northern Europe into contact with the civilization of the Mediterranean states. Themselves possessed of no tradition of stone construction, they adapted the styles and orders of Classical architecture to their own purposes; though they succeeded in evolving a style very different from the prototype, as they impressed their own national characteristics upon it.

Irish Romanesque is a monument of the missionary enterprise of the Irish ecclesiastics, who travelled upon the Continent of Europe in the eighth and ninth centuries. These gave back to Europe the light of learning and religion, which had been well-nigh quenched in the preceding troubled centuries. "How could we forget the Island of Ireland," writes a ninth-century German monk,[1] "whence we received the radiance of so great a light, and whence for us the sun of Faith arose?" In return for the gift thus gratefully acknowledged, the travellers imparted to their brethren at home a knowledge of certain of the arts, more especially the art of building in stone, which had till then been but rudimentary in Ireland. The history of Irish Romanesque has yet to be written; but it is evident that it was fed by more streams than one. There are clearly defined German elements in some of the buildings, notably in Cormac's Chapel at Cashel:[2] there are some examples in which a French analogy is rather to be sought: while underlying all are the native traditions, derived from the primitive buildings. In one respect does Irish Romanesque display affinity with the Romanesque of England—namely, in the absence of the apse, a feature entirely unknown in Ireland.

It is unfortunate that with the exception of a few of the latest structures, none of the examples of Irish Romanesque can be certainly dated. There are inscriptions on the ornamental doorways at Killeshin (Carlow) and Freshford (Kilkenny) mentioning persons who were certainly contemporary with the building of the churches, but these persons have not been identified.

In the Irish Romanesque, the round-headed arch is universal, and it is usually recessed in a number of orders, from two to six. The voussoirs are richly carved, and usually the scheme

[1] Quoted by J. M. Clark, *The Abbey of St Gall* (Cambridge 1926) p. 29.
[2] See on this subject C. McNeill, "The Affinities of Irish Romanesque Architecture," JRSAI xlii p. 140.

of ornament in the different orders of an arch is carefully contrasted: even when the favourite chevron device is used, it is ingeniously varied in form or treatment. The jamb-shafts, also, are decorated with surface carving, with rich effect. Capitals rarely, as in English work, shew the reminiscences of the Ionic or Doric capitals from which they are ultimately derived, and floral devices on the capitals are likewise uncommon; very frequent is a square capital with a human head at the corners, the hair, beard, ears, and other projections being made the starting-point of fantastic interlacements. The use of the human head in the decoration of Romanesque buildings is a leading characteristic of the style as developed in Ireland.

With the forms of ornament specially associated with the Romanesque styles are sometimes associated interlacements, key-patterns, and the other types of decoration belonging to Celtic art. This however is, on the whole, exceptional: the artists seem to have felt the incongruity of a mixture of styles. This is the more remarkable in that the sense was altogether lost in Mediæval Ireland; the incongruities which were admitted into Gothic buildings have no parallel in any other country.

Towers, as an intrinsic portion of the main building, are unknown in Irish Romanesque churches. Their place is taken by campaniles of circular plan—the famous "Round Towers" of Ireland, which have been the storm-centre of the absurdest of disputations.

Sculptured tympana are very rare in Irish buildings; indeed, any sort of tympanum is exceptional. There is a tympanum, plain outside but with a grotesque head in relief on the inner face, over the west doorway of Kilmalkedar (Kerry); another, plain, but surrounded with an arch of heads at Ballysadare (Sligo);[1] and two tympana with figures—one of them of a *Sagittarius*—in Cormac's Chapel. An interesting carved stone over the doorway of the "Priest's House" (so-called) at Glendaloch should not be forgotten.[2]

Circular windows are extremely rare in Ireland; there is a good example at Rahan (Offaly).[3]

The use of human heads in the ornamentation of Irish

[1] W. F. Wakeman, "Architectural peculiarities of some ancient Churches in the County of Sligo," JRHAAI xvii p. 43.

[2] Illustrations of this stone, which represents three ecclesiastics, will be found in Petrie, *Ecclesiastical Architecture of Ireland* (Dublin 1845) p. 251: JRHAAI xii p. 469. For a convenient description of the ruins of Glendaloch see JRSAI xxxi p. 186; a very full account of the site, with drawings of all the sculptured stones and plans of all the buildings has been published by the Irish Board of Public Works for sale on the spot.

[3] See Petrie, *op. cit.* p. 244.

Romanesque buildings has been noticed. It is very common to find a head sculptured on the topmost voussoir of an arch, and also at the ends of the drip moulds. At Dysert O'Dea (Clare), the outer member of the arch-mould is represented by a ring of heads;[1] and in the west doorway of Clonfert Cathedral there is a pyramid of heads in the pediment over the arch. Some of these heads possess so much individuality that they must be considered as efforts at portraiture—though whether the portraits are intended for ecclesiastical dignitaries of the time and place, or for enemies whose heads were thus suspended to the wall as, in earlier times (*teste* Poseidonius), their real heads would have been so displayed, and as they would have been displayed on Temple Bar down to the eighteenth century, is a question which we cannot profess to decide. In the very primitive church at Tarmon (Clare) heads are scattered about the masonry of the wall quite at random.[2]

Animal heads are also found, though not so frequently, as well as that strange decoration, the beak-head. The favourite geometrical decoration is the chevron, which is used in a great variety of ways. In English work the chevrons are usually so placed that the zigzags meet the eye; in Irish work the chevron is often on the intrados of the arch, so that it is the points which catch the eye, and the effect is greatly enhanced by the rhythm of the consequent shadows. Sometimes there are chevrons on the vertical surface as well as on the intrados; in this case they may meet point to point, or else point alternating with point. Next in favour to the chevron come pellets, billet-moulding, and flat, shallow floral work.

The addition of Celtic interlacements and other devices to the Romanesque patterns is a proof that these beautiful buildings, though in an imported style, were erected and enriched by native craftsmen.

The Round Towers

Nothing is to be gained by raking up dead controversies, and the most unprofitable of all controversies is that which raged around the Campaniles. These, under the name of "Round Towers," seem to have been potent instruments for breaking up happy homes and severing tender friendships! The Round Towers were nothing more and nothing less than the belfries of Christian churches, which could be, and doubtless were, used on occasion as watchtowers and as keeps in the troubled times when they were built. To make them available for the last-named purpose, the doorway was usually,

[1] Dunraven, *op. cit.* plate cxviii.

[2] *Ibid.* vol. i p. 105 and plate liv.

though not always, at a certain height from the ground, so that a ladder was necessary to reach it. Their date and purpose are proved by their architectural styles and ornament, when they possess any:[1] by the use of mortar in their construction; and by their association with church buildings, still existing or known to have existed in the past. Any and every other theory about their origin and their use is as unworthy of serious discussion as Bacon-Shakspere, or British-Israel, or Great-Pyramid Prophecy theories, and with these may be summarily dismissed. They are one and all nothing but irresponsible and unmitigated nonsense.

Round towers are by no means confined to Ireland. The famous campanile of Sant' Apollinare in Ravenna is almost indistinguishable from an Irish Round Tower in its essential characters, however it may differ in the details of its construction and ornament. Similar campaniles are to be seen in Scotland (at Brechin, Abernethy, and at Egilsay in the Orkney Islands) and in England (at Bartlow and Snailwell in Cambridgeshire, and a number of other places). The last-named examples are found in places where no good building-stone for the making of corners is available. Where defence had to be considered, the circular plan was especially advantageous. Missiles would glance off the curved surface: and there were no corner-stones which could be prised out with crowbars. Internally, the space in the Irish towers was divided by floors of wood, resting on offsets in the masonry, which are to be seen in the interior of all existing towers. In some cases, as in the tower attached to St Finghin's Church, Clonmacnois, the offsets are too numerous and too close together to give head-room to the floors: possibly provision was allowed for a change of the internal arrangement of the tower if for any reason such would seem to be desirable. Doubtless communication was established between the floors by means of ladders. Each floor was lighted with a small window-opening: these are so placed that every side is commanded by some one window; in no case is it possible to see all the windows in any one aspect of the building. Missiles could thus be thrown from within upon a besieging party on all sides. The topmost floor is the ringing-loft. The bells were not hung in the tower; they were mere handbells, rung out of the windows. Usually there are four windows in the ringing-loft, each facing a quarter of the compass; but in the greater tower of Clonmacnois there are eight openings, and in the tower of Kells there are five. On

[1] Very notable in this connexion is the Romanesque decoration of the tower at Timahoe (Leix): see the full series of illustrations in JRSAI liv p. 31.

the other hand, in the smaller tower of Clonmacnois there are only two openings, as the other sides faced directly upon marsh and river lands, where people were not likely to dwell. The ringing-windows are always tall, narrow, rectangular openings with lintel coverings : the subordinate windows may sometimes be arched.

The top of the tower, when complete, is conical in shape, domed on the under surface ; its construction, in fact, resembles the double-roof construction above described, adapted to a circular space. The tower on Tory Island is roofed with a false dome, *i.e.* a bee-hive construction with horizontal masonry-joints : the tower of the church in Ship Street, Dublin, blown down in the eighteenth century, had a similar dome.

In the round towers at Glendaloch and at Timahoe, and perhaps in some others, there is a hole pierced through the wall, immediately under the doorway. This may have been a spy-hole or means of communication whereby those inside could discover who was demanding admission before they unlocked the door: [1] or it might possibly have been meant to allow passage for a rod by means of which the defenders could overturn the ladder of an attacking party.

A number of towers have individual peculiarities ; in fact, all of them have some special characteristic, so that to describe them here would almost involve the compiling of a descriptive list of the extant monuments of this class.[2] We can mention only one or two of the more remarkable anomalies here. At Kineigh, Cork, the base of the tower is hexagonal, the round portion beginning about 18 feet from the ground : [3] similarly, the lower part of the tower at Killossy (Kildare) is square. The tower on Scattery Island, which is the highest perfect tower of the series remaining (120 feet), has its doorway on the ground floor, not raised to an inaccessible height as is more usual.[4] The church on Inis Clothrann, Loch Ree, has a *square* tower ; the same exceptional form is to be seen in the church at Kinloch (Mayo).[5]

The literature of the Irish Round Towers is very con-

[1] G. H. Orpen, "The Round Tower of Glendalough ; an unnoticed feature," JRSAI xxxvii p. 404.

[2] Such a list will be found in T. J. Westropp, "A list of the Round Towers of Ireland with notes on those which have been demolished," PRIA xxi p. 294. He enumerates 98, of which 13 remain in a perfect condition.

[3] Caulfield, Harkness, and Haines, "Examination and measurements of the Round Tower of Kineigh, barony of West Carbery, Co. Cork," JRHAAI xv p. 16.

[4] See the description, JRSAI xxvii p. 282 ff.

[5] JRSAI xxx p. 81 ff. : *ibid.* p. 164.

siderable, but for the greater part is not worth the trouble of reference, except for amusement.[1]

Romanesque Churches

Irish Romanesque churches are fairly numerous; almost every county has valuable examples. The subject well deserves a special monograph: here we need do no more than mention a few examples, selected almost at random:—

Clonmacnois (Offaly): The Nunnery Church.—Doorway in four orders, chancel arch in three. Every voussoir is elaborately enriched, especially in the chancel arch, which displays a combination of Celtic with Romanesque enrichment.[2] There is a notable series of grotesque heads in the arch.

Ardmore (Waterford).—A roughly-built structure, but enriched with a unique and most remarkable arcade on the outside of the eastern wall, with sculptured figures under the arches. One of the finest campaniles in Ireland stands beside this building.[3]

Kilfenora (Clare).—Late Romanesque. The east window is especially noteworthy; it consists of three round-headed openings united under a circular arched recess.[4]

Inismaine (Mayo).—A simple Romanesque building, but with some remarkable decorative carvings.[5]

Tuam (Galway).—The cathedral contains a great chancel arch in six orders, difficult to see owing to the imperfect lighting of the church: it is one of the finest Romanesque arches in existence:[6] every voussoir is richly carved.

Killaloe (Limerick).—The cathedral is chiefly Gothic, but possesses a very fine Romanesque doorway in four orders[7] (Plate VIII).

Kilmalkedar (Kerry).—A most interesting little building, consisting of nave and chancel. The west doorway is an arch of two orders, with a plain tympanum. The winged finials of the gables remain, and have been re-erected in recent years. The chancel arch is carved with a simple but effective chevron

[1] Excellent pictures of the best examples will be found in Dunraven, *op. cit.* II pp. 1-49. The standard work on the subject is Petrie's *Ecclesiastical Architecture of Ireland.*

[2] Dunraven, *op. cit.* II plates cxiii, cxiv.

[3] See T. J. Westropp, "Notes on the antiquities of Ardmore," JRSAI xxxiii p. 353.

[4] See photograph and illustrations in JRSAI xxx p. 393 ff.: Dunraven, *op. cit.* II plate cxxiv.

[5] Archbishop Healy, "Two Royal Abbeys of the Western Lakes," JRSAI xxxi p. 1.

[6] Dunraven, *op. cit.* II plate cxi. A good engraving will be found in JGAHS III p. 141.

[7] Dunraven, *op. cit.* II plate cv.

pattern. A curious ornamental feature is a row of sunk panels —hardly an arcading—separated by piers with cushion capitals, running along the inside of the nave walls.

Roscrea (*Tipperary*).—The west end of this church has an effective arcade decorated with chevrons, and a fine doorway above which is a tall pediment.[1] The building still retains the primitive corner pilasters.

Cashel (*Tipperary*).—The chapel of King Cormac mac Carthaigh is the finest specimen of Romanesque architecture remaining in the country.[2] Its excellent proportions, its judicious combination of rich ornament and simple dignity, and the great strength expressed by its vaulting ribs, make this building singularly impressive. The exterior is diversified with arcading, very suggestive of the Romanesque of the Rhineland.[3] The date of this structure is A.D. 1124.

Clonfert (*Offaly*).—The cathedral here is the last supreme effort of native Irish architecture: it was built in 1166, just six years before the coming of the Normans. The west doorway, small though it be, is one of the art-treasures of the world. It is in six orders; a seventh, of late mediæval date, has been awkwardly inserted, evidently with the purpose of rectifying the remarkable slope of the jambs and making the door-opening more conveniently adapted for receiving a wooden door. Both arches and jamb-shafts are carved with an extraordinary variety of decorative detail. Above the arch there is a lofty pediment containing in its lower half an arcade of five arches, with a carved head underneath each, and in its upper half a triangular diaper of human heads and floral work alternating. The total height of the composition is about 30 feet.

The outstanding features of this doorway are :—

1. The persistence of the sloping jambs, though the presence of the arch, which will span a space of any size, makes these no longer necessary. It is possible that the Irish architects were so accustomed to the appearance of a doorway with sloping jambs (not only in the stone buildings which have survived in part, but in the enormously greater number of wooden buildings which have wholly disappeared) that vertical jambs would in their eyes appear to slope outward. This unpleasant optical delusion would be increased in the present case by contrast with the prominent slope of the sides of the large pediment above the archway, if it were not corrected by sloping the doorway inward.

[1] Dunraven, *op. cit.* II plate cxxi.

[2] See Dunraven, *op. cit.* II p. 72. The chapel has been described and illustrated several times.

[3] See on this Mr. C. McNeill's important paper, "The affinities of Irish Romanesque Architecture," JRSAI xlii p. 140.



DOORWAY IN KILLALOE CATHEDRAL

2. The remarkable sculptures of figures of heads, which enter into the composition of the great triangular pediment surmounting the doorway. These are so life-like that they are probably portraits, and they are sufficient to suggest a doubt whether the alleged inability of the Celtic artists to represent the human figure, which has been inferred from the grotesque illuminations in manuscripts, was not rather a matter of deliberate choice than of an innate incapacity.

3. The combination of typical Romanesque ornament with interlacing work of the best and purest form—remarkably pure, indeed, considering the late date of the structure.[1]

When we enter the church our attention is immediately arrested by the wonderful east window, which, in its way, is as great an artistic triumph as the doorway. The doorway depends for its effect on the extraordinary richness of its decoration: the window is of a severe simplicity, but produces a powerful impression by the absolute perfection of its proportions. There is a good measured drawing of the window in Brash's *Ecclesiastical Architecture of Ireland*, at p. 44: from which we may quote (with slight modifications) the accompanying description:—

This is a couplet of semi-circular openings, each measuring 8 feet high from sill to soffit, 12½ inches wide externally, and, owing to the great splay of the jambs, 7 feet 6 inches wide internally. The window is built of a dark close-grained limestone of great hardness and durability, in courses of from 7 to 16 inches in height, most of the stones being the entire breadth of the jamb, which is 5 feet on the splay. The angles are moulded internally and externally; on each of the splays there are carved two semi-circular headed panels; the inside sills finish with a string upon which rest the moulded bases of slender shafts, having carved capitals, from which spring the arch members. The design of this window is exceedingly chaste and beautiful, the moulding simple and effective, and the workmanship superior to anything I have seen, either of ancient or modern times. The mouldings are finely wrought and the jointing of the stonework so close that I cannot believe that it was wrought with tools; the stones must have been rubbed on the joints to make such close work.

One feature of this building must not be passed over. The inside surfaces of the walls are dotted over at random with queer little figures of animals and of mythical monsters, carved in relief.[2] These display much wealth of invention and of technical skill in execution. In a word, Clonfert Cathedral would alone make the subject of a large monograph, and when it was written it would be found to be a treatise on Romanesque architecture. The building testifies to strength at its prime, with a magnificent future before it. But six years after the

[1] On this doorway see further H. S. Crawford, "The Romanesque doorway at Clonfert," JRSAI xlii p. 1.

[2] These still remain unpublished, except a mermaid, figured in JRSAI xlii p. 6.

erection of Clonfert Cathedral the Anglo-Norman invasion took place, and the vision faded. It is impossible not to regard the sudden and total disappearance of all the native arts as the direct consequence of that event. The fact is so noteworthy that it calls for explanation; and no other explanation is available.

Domestic Buildings

Domestic buildings of the Celtic Christian period are rare in Ireland. Doubtless most of the domestic buildings of the monasteries—when they were not mere bee-hive huts, as on some of the island settlements—were made of wood. At St Brecan's, Onacht, on the Greater Island of Aran, there are the foundations of small square buildings scattered round about the central church. These undoubtedly are the remains of the domestic buildings of the monastery, although they are known by the conventional misnomer, "The Seven Churches"; but they were built at a time when Gothic art had spread even to this remote island, and therefore cannot be assigned to a very early date. There are the shells of two cottages, called respectively, "The Chancellor's House" and "The Priest's House" close to the church of Kilmalkedar. The traditional names are probably so far accurate that these were actually domestic buildings in some way associated with the church establishment. The "Chancellor's House" has rudely-fashioned round-headed windows. The windows of the "Priest's House" are square, but are fitted with the unusual appendage of sliding stone shutters.[1]

"Sweat-houses"

There is a class of structures, known in the regions where Irish is still spoken as *Teach an Alais*, or "sweat-house". They were used to within recently-living memory as offering a remedy for rheumatism, that bane of the Irish country-side. The buildings resemble ordinary bee-hive huts. When one of them was to be used, a fire of peat was kindled within it, so that the inside was heated almost like an oven. The patient, wrapped in blankets, entered; and the door was closed upon him. He sat for a while within, bathed in a profuse perspiration. After coming out, he refreshed himself with a plunge into cold water. The best-known bath-house of this kind is on the island of

[1] See JRHAAI xi (1870-71) p. 578 for diagrams of these.

Inishmurray;[1] but there are others in Cavan, Tyrone,[2] Derry,[3] Cork,[4] as well as on Rathlin Island.[5]

The establishments known in English-speaking countries as "Turkish Baths" are in certain parts of Central Europe called *Römische-Irische Bäder*, "Roman-Irish Baths". This name, however, is not older than the middle of the last century; it is due to the advocacy by a Dr. Barter of Blarney of this form of treatment; not as might be fondly imagined, to the influence of ancient Irish missionaries.

[1] W. F. Wakeman, "A survey of the antiquarian remains on the island of Inishmurray" (London 1893) p. 37.

[2] W. T. Latimer, "Sweat-house near Eglish, county Tyrone," JRSAI xxiv p. 180.

[3] S. F. Milligan, "The ancient Irish hot-air bath," JRHAAI xix p. 268: *Idem*, "Recent antiquarian explorations," JBNHPS (1889-90) p. 25.

[4] A sweat-house at Glanworth, Co. Cork, is illustrated in JCHAS II xviii, facing p. 168. See also J. Buckley, "An ancient hot-air bath-house near Schull, Co. Cork," *ibid.* vol. xix p. 1.

[5] Rev. D. B. Mulcahy, "An ancient Irish hot-air bath, or sweat-house, on the island of Rathlin," JRSAI xxi p. 589.

CHAPTER VI

THE PRINCIPLES OF IRISH CHRISTIAN ART

Celtic and Teutonic Art

IN the present chapter we shall consider the motives of Irish Christian art — the materials of which its designs are composed, and from which the decorative art practised in the country, under the influence of Celtic Christianity, was built up. We shall, so to speak, dissect that art, and lay bare its structure and organism. In the following chapter we shall consider its practical application, as exemplified by actual specimens that have survived.

It must not be forgotten that this art was only a portion of a much greater whole. During the centuries that followed the collapse of Rome, a form of decorative art was developed in Central and Northern Europe, which drew its inspiration from many seemingly incongruous sources—La Tène, Rome, Byzantium, Persia, and the East—and welded their several elements together into a singularly harmonious unity. The Celtic peoples, and the various Germanic communities, had each its own contribution to make to this development ; in consequence the study of this art is a labyrinth, and we still await the master who shall furnish a clue to all its ramifications. The Celtic branch of this European art differs in certain essential details from the Germanic : but there is a considerable interaction, and the influence of Ireland upon Scandinavia and *vice versa* is in itself a matter upon which a large volume might be written.

Classification of Irish Christian Art-Motives

For the present, however, we must confine ourselves to Irish work, leaving aside these larger problems. A very brief study of the subject will shew that the existing remains of Irish Celtic Christian art-patterns can be divided into certain classificatory subdivisions. The most obvious of these divisions

is into *concrete* and *abstract* devices. Concrete devices are representations of actual objects—men, animals, plants, and, broadly, "things": but we must strain a little our conception of the meaning of the word "actual," in view of the grotesque unreality of some of the animal figures which we meet with. Abstract devices are combinations of geometrical figures, in which there is no apparent resemblance to any actual object; but here again we cannot accept the definition as absolute, for many seemingly "abstract" devices can be traced back to representations of "concrete" objects, having lost all semblance to their originals by the effect of successive copying.

Both these classes may be subdivided further. Concrete devices may be *decorative* or *symbolic*. Decorative devices are mere ornament; symbolic devices are intended to call forth an association of ideas which will teach, or at least suggest, some important spiritual lesson to the spectator. But here, again, it is not easy to draw any hard-and-fast line between these classes. Probably the boundary varies at different stages of the historical evolution of the art. In general, significant symbols tend to degenerate into, first, a commonplace of convention, and then, mere ornament: while, on the other hand, it is seldom, if ever, that merely ornamental figures take to themselves a symbolic significance in the course of time. Thus the earlier in time the decorated object may be, the more is significant symbolism to be expected to dominate over mere decoration.

Again, we may classify symbolic devices still further, into *pictorial* and *suggestive*. The former represents the actual scene to be symbolized, such as the Fall of Man or the Crucifixion. The latter typifies it under an allegory with an agreed meaning, as when a pelican wounding her breast is represented, to remind the spectators of certain details of Christian doctrine. Here, again, no definite line of demarcation can be drawn. Many of the pictorial scenes possess an important suggestive meaning in addition to their historical significance. Representations of the Fall of Man, or of the Ark on the Waters, are depicted, not so much to shew forth events of Biblical history, as to remind the spectators of the doctrine of Original Sin, or the Saving Power of the Church.

The abstract patterns used in Irish Christian art[1] may be grouped according to their method of construction into four divisions, as follows:—

[1] G. Coffey, *Guide to the Celtic Antiquities of the Christian Period preserved in the National Museum, Dublin* (Dublin 1909), is a convenient and richly-illustrated introduction to the subject of Celtic art in Ireland. It supplements, and to some extent supersedes, M. Stokes's handbook of *Early Christian Art in Ireland*.

i. *Spiral* patterns, in which spirals are the chief element in the decoration.

ii. *Interlacing* patterns, in which a winding band, or a number of such bands, meander over the surface to be decorated. When the band, in its course, meets with another band, or another section of the same band, it crosses it, passing over and under alternately after the manner of basket-work.

iii. *Key* patterns, so called from a fancied resemblance which they possess to the twistings of a complicated key. This form of ornament is likewise based upon the meanderings of a continuous band, but it differs essentially in that when a band meets another in its course it never crosses, but bends to avoid crossing it.

iv. *Diaper* patterns, in which a single device or group of devices is repeated after the manner of a chequer-board over the surface to be decorated.

We may now tabulate the classification that has been indicated, and then proceed to consider each division in its turn.

- (A) Concrete devices.
  - (*a*) Symbolic.
    - (1) Pictorial.
    - (2) Suggestive.
  - (*b*) Decorative.
- (B) Abstract devices.
  - (*a*) Spiral patterns.
  - (*b*) Interlacing patterns.
  - (*c*) Key patterns.
  - (*d*) Diaper patterns.

Symbolic Devices

In Christian art, Symbolism is as old as the Catacombs. Many of the chief scenes of Biblical history from both Testaments are there represented. Indeed, the Christians of the Catacombs did not disdain to see the truths of their Faith concealed under the mask of the ancient mythologies in which they had been reared, and so to find types of Christ in the gracious figures of Hermes and of Orpheus. At a later date something analogous may be seen in certain of the sculptured crosses of England and of the Isle of Man. These are beyond doubt Christian monuments; yet they bear among their sculptures unmistakable representations of scenes from Scandinavian mythology. On crosses at Gosforth, in Cumberland, and on not a few of those in the Isle of Man, there may be seen representations of events in the legends of Thór, of Loki, of Sigurd Fafni's-bane,



FIG. I



FIG. 2

PANELS FROM THE SCULPTURED CROSS OF ABBOT MUIREDACH AT MONASTERBOICE (A.D. 922)

and of other gods and heroes of Northern tradition, brought thus into direct association with Christian symbols. In this respect the iconography of Ireland presents a marked contrast. There is no borrowing from pagan sources in Irish Christian sculptures : here the breach with paganism is complete, for the at first sight paradoxical reason that paganism still had some power in the country, at the time when the works of art which we are to describe were executed. Around Gosforth, Thór and Loki were already so far dead that the Christians who there set up a great stone cross felt free to play with them, in the same spirit as that of the seventeenth-century parents in Penfield, Sussex, who played with Classical mythology in an extraordinary epitaph which they set over their dead child, beginning thus :—

> Great Jove hath lost his Ganymede, I trow,
> Which made him seek another here below ;
> And finding none, not one, like unto this,
> Hath ta'en him hence unto eternal bliss—

and so forth. We may convict the author of this doggerel of atrociously bad taste, but hardly of paganism. On the other hand, the Christians of Ireland could not afford to take such liberties. Of all the scenes that have been identified in the figured scenes of Irish Christian art, only three seem to have no direct relation to Biblical history or to Christian symbolism.

The scenes that are most frequently depicted—chiefly in the sculptured panels of the great standing crosses [1]—are as follows :—

The Fall of Man.—Adam and Eve stand under the tree. The serpent is coiled around the tree-trunk, and is whispering into Eve's ear. Eve hands the apple to Adam : sometimes Adam holds *another* apple in his hand, which he is engaged in eating : and the pair betray by their attitudes the newly-awakened sense of shame. This illustrates one leading feature of these symbolic sculptures ; they are not, as it were, " snap-shot " representations of one moment in the action of a drama. Rather are they a sort of synthetic motion-picture, in which a compendium of all the phases of the event is shewn in one representation. Here the four successive stages—the temptation, the yielding of Eve, the yielding of Adam, and the consequences of the sin—are all shewn as though occurring simultaneously. (Plate IX Fig. 1, lower panel.)

[1] The reader may be referred for illustrations to M. Stokes, *Early Christian Art in Ireland* (South Kensington Handbooks) : Henry O'Neill, *Illustrations of the most interesting of the Sculptured Crosses of Ancient Ireland* (London 1857) : R. A. S. Macalister, *Muiredach, Abbot of Monasterboice* (Dublin 1913) : H. S. Crawford, *Carved Ornaments from Irish Monuments* (Dublin 1926) : J. R. Allen, *Early Christian Symbolism* (London 1897).

Cain killing Abel.—Cain, a man of middle age, buries an axe or some similar weapon in the head of Abel, represented as a youth. (See the same panel.)

The Ark.—A closed vessel with windows. The birds perch upon it outside.

Abraham sacrificing Isaac.—Abraham presses Isaac into a stooping posture over an altar, and raises his knife. The ram in the background.

Moses in the Mount, seated between Aaron and Hur, who support his hands.

Moses smiting the Rock.—Moses, represented as a gigantic figure, strikes with his staff on the background of the panel ; the outflowing water is represented as an amorphous mass issuing from a hole. Rows of small figures represent the Israelites crouching to receive the water. (Plate IX Fig. 2, lower panel.)

Moses receiving the Law.—This scene is represented but once, on one of the crosses at Kells (Meath) ; the interpretation is due to Mr. H. S. Crawford.[1] The Divine Hand writes on a tablet, which is held by Moses.

Samuel anointing David.—The youth kneels before Samuel, who pours oil upon his head from a horn.

David slaying the Lion and the Bear.—David kneels on the back of a nondescript beast and tears its jaws apart. The shepherd's crook, or the presence of a sheep, distinguishes David, otherwise the sculpture might represent a similar event in the life of Samson. Both scenes are depicted on the shaft of a cross at Old Kilcullen (Kildare) : this affords an interesting opportunity for comparative iconography.

David slaying Goliath.—David stands, holding the open sling by one of its ends. In front of him is the giant, fallen on his knees, and pressing his hand to his forehead. On the representation of this scene at Monasterboice (Louth), Saul is represented in the background drinking out of a horn. This is meant to suggest the *insouciance* of the Hebrew king, who suffers a stripling to fight his battles for him : there is also a reminiscence of the story of David discovering Saul asleep in his tent, with his water-bottle beside him. (Plate IX Fig. 1, upper panel.)

The Three Holy Children in the Furnace.—Three figures in the middle ; an angel spreads his wings over them ; on each side, men with long rods cast faggots on the fire.

Daniel in the Den of Lions.—A figure stands between two animals heraldically disposed on each side of him. (To recognize these creatures as lions we must abandon all our preconceptions of the appearance of this species.)

[1] See Crawford, *Carved Ornaments from Irish Monuments*, plates xliii, xliv.



FIG. I

FIG. 2

THE TWO FACES OF THE HEAD OF THE MONASTERBOICE CROSS

The Adoration of the Magi.—The Blessed Virgin seated, holding the Babe, over Whose head is the star. The Magi in front, in a respectful posture. (Plate IX Fig. 2, upper panel.)

The Flight into Egypt.—The Blessed Virgin with the Babe, seated upon an ass, which is led by Joseph. The ass was unknown in Ireland in Celtic times, so that in this panel we must see an indication of the copying of foreign models by a native artist. The ass figure is unmistakable, unlike the figure of the but little less familiar lion in the Daniel scene.

The Baptism of Christ.—Christ stands with the Baptist in the Jordan, represented as a ribbon-like stream flowing from the traditional two sources. Above, the Holy Dove.[1]

The Multiplication of the Loaves and Fishes.—This miracle would be difficult, if not impossible, to represent realistically. It is suggested by a series of five discs, representing the loaves, and two fishes. These appear alone on the Moone (Kildare) cross.[2] On the north cross of Castledermot, in the same neighbourhood, the figure of Christ stands holding one of five *large* discs; scattered among these is a series of five *small* discs, intended to suggest the bread before its multiplication. (Plate XI.) On the south cross at the same place, this curious expedient is not carried out. Christ, as before, holds out one of the loaves; beneath is a series of eight small figures to suggest the multitude.[3] In the Moone panel just mentioned it is the multiplication of the *fishes* which is indicated by two small and two large fishes.

Christ arrested in Gethsemane.—Christ in the centre; a soldier on each side seizing His arms.

The Crucifixion.—In this scene the Figure on the Cross is sometimes, though not always, fully draped. The sponge-bearer (with a *bowl* rather than a sponge at the end of a long staff) and the lance-bearer are almost always depicted, one on each side. Often two angels are introduced above, supporting the Head of Christ. The two thieves are sometimes represented. On two stone crosses at Onacht, Aran, they are shewn, not crucified but hanging by the neck, under the arms of the Chief Figure, on ropes.[4] An extremely crude representation at Carndonach seems to shew a similar conception of the scene.

[1] See the study of the iconography of this subject by Rev. J. Healy, JRSAI xxiv p. 1.

[2] M. Stokes, "Notes on the High Crosses of Moone, Drumcliff, Termonfechin, and Killamery," TRIA xxxi p. 541.

[3] The Castledermot crosses are figured by Margaret Stokes, *The High Crosses of Castledermot and Durrow* (Dublin, 1898).

[4] Dom Louis Gougaud has made a very valuable iconographic study of this scene, for which see JRSAI l p. 128.

In this case the angels supporting the head of Christ appear, most grotesque drawn.[1] (Plate X Fig 1.)

The Incredulity of St Thomas.—Christ between two men, one of whom touches his side.

The Final Commission to the Apostles.—Christ seated upon a Throne, hands books to the evangelists, who stand in a reverential attitude before Him.

Christ in Glory.—Christ stands, holding in one hand the Cross, in the other a flowering sceptre. This scene is generally part of a larger representation of the Last Judgement.

The Archangel Michael contending with Satan.—Satan is shewn either prostrate or inverted. But the inverted attitude —also seen in some representations of Goliath—is really an attempt to overcome the difficulty of shewing in perspective a prostrate figure with its head turned toward the spectator. This has been misunderstood in modern times: the figure of Satan thus inverted on the larger cross at Monasterboice was once explained by a writer who dealt with it as " a juggler or tumbler ". And perhaps it was likewise misunderstood in ancient times as well: a reminiscence of some such misunderstanding may possibly be responsible for the description of an apparition of Satan to St Brigid " with his head down and his feet up ".[2] (This and the Judgment scene in Plate X Fig. 2.)

The Meeting of St Paul of Thebes and St Antony in the Egyptian Desert.—This is one of the few non-Biblical scenes represented. The aged hermits with their staves face one another; the heaven-sent bird brings a loaf for their sustenance; the two contend as to which of them shall break the loaf.

The Decapitation of Cormac mac Cuillendáin, king and archbishop of Cashel (A.D. 908).—I adopt the very probable suggestion of Professor Tomás ó Máille, University College, Galway, made in conversation to me, that a scene representing a headless warrior brought to his burial, shewn on two of the sculptured crosses (at Dromiskin (Louth), and Ahenny (Tipperary)), refers to this tragic event of contemporary history.

The Foundation of Clonmacnois.—It is related in the *Lives of Saint Ciarán*, the founder of Clonmacnois, that when the saint was setting up the corner-posts of his church he called to a passing warrior to lend a hand. The warrior did so, and as a reward was promised the kingship of Ireland, which he shortly afterwards obtained. The scene is represented on one of the sculptured crosses at the site[3] (Fig. 14).

[1] See JRSAI xlv p. 145.

[2] *Lives of Saints from the Book of Lismore*, line 1402 ff.

[3] Crawford, *op. cit.* plates xlvii, xlviii, Fig. no. 146. Some other event of local ecclesiastical history, as yet unidentified, seems to be represented on a panel at Old Kilcullen (Kildare): *ibid.* Fig. 149.



THE MULTIPLICATION OF THE LOAVES AND FISHES, AS REPRESENTED ON THE NORTH CROSS AT CASTLEDERMOT, CO. KILDARE

We have seen that the representation of the flight into Egypt, introducing the figure of an ass, is an indication that the Irish artists followed foreign models in their representations of Biblical scenes. Other indications of foreign influence are available. The Gospel-book of Lindisfarne is decorated with miniatures of the Evangelists drawn as frontispieces to their respective Gospels; these are quite in a Byzantine style, and are accompanied by the names of the Evangelists in Greek, though written in Roman capitals.

In fact, over all Christendom a scheme of iconography became traditional—subject, no doubt, to local variation in detail, but still, on the whole, uniform. The various Biblical and ecclesiastical heroes and heroines were always represented in the same way, or were shewn as carrying some symbol by which they could be immediately identified: and the scenes in which they took part were depicted according to fixed conventions, so that the unlettered were always able to recognize the incident, even if they could not decipher such written legends as may have accompanied them. Catacomb wall-painting, early Christian sculptured sarcophagi, the miniatures in Byzantine and other early schools of manuscripts, the carved ivories and other works of art, the sculptured crosses of Ireland, all carry on a universal European tradition, and all help to a mutual elucidation. In Christian art, as in other sections of our study, to treat Ireland apart from contemporary Europe is a fatal mistake, and can lead to no complete or satisfactory result.



FIG. 14.—The foundation of Clonmacnois.

Such an extended study would, however, be here out of place. It would need to be the subject of a special monograph, lavishly illustrated. As in the case of the architectural history of the country, we cannot do more than to indicate the lines on which such a study should be made, without making any attempt to fill in the programme within the narrow limits of the present volume. The first essential is a complete collection of all the sculptured panels on the crosses,[1] and of all the miniatures in manuscripts, in separate photographs. These should then be classified according to subject and approximate date; after which search should be made among the countless

[1] Mr. H. S. Crawford has gone far to supply this initial *desideratum* in his work, *Carved Ornaments from Irish Monuments* (Dublin 1926).

works of art in the museums and libraries of Europe for other treatments of the same scenes. The work of comparison would be long and tedious, but at the end we should have gained a much more exact knowledge of the place of Ireland in the history not only of Christian Art but also of the Christian Church than would be attainable by any other means.

The Irish artists impressed a certain individuality on the conventional scenes which they reproduced. In costume, the sculptor or illuminator followed the fashions to which his eye was accustomed. The costumes of warriors in Irish tradition, as described in the sagas that relate to them, may be illustrated by the costumes of the heroes of Hebrew history, as depicted upon the Irish crosses. Biblical characters wear the Celtic ringed brooch: Satan drives his victims to their doom with a sort of hay-fork identical with one that has been dug from an Irish bog. The mediæval artist everywhere was dominated by the life and manners of his immediate surroundings; he drew Solomon's Temple as a church building such as he saw in his own village; he drew a crowd in Jerusalem as a typical crowd of his own city and his own century. If, to take a secular example, he were illustrating some of the romances which grew up around the city of Troy, he shewed a mediæval castle or turreted city, surrounded with a moat, and attacked and defended by knights in plate armour. To this rule the Irish artists were no exception. They decked out the heroes of old in the costumes worn by themselves and their contemporaries, and equipped them with the weapons, tools, and instruments which they were themselves in the habit of using. Noah, as represented in a rude drawing in the fourteenth-century *Book of Ballymote,* sets forth on his voyage in a fourteenth-century ship, attired like a fourteenth-century king.

But Celtic art was essentially an art of abstractions. The artist failed, or seems to fail, in attempting to reproduce something that was objectively before him. His talent lay in the evolving from his own mind of beautiful geometrical forms, and the more he succeeded in assimilating the representations of concrete objects to those abstractions, the greater were his artistic triumphs. Set him to draw a man, or a cat, or any other creature from life, and he produced something stiff and wooden; but give him leave to twist his figure into knots impossible in nature, and to embellish it with dainty spirals and other applied ornament, and then he would display a wonderful power of imagination, and an equally wonderful command of technical resource. See Plate XII Fig. 1, noting the instructive contrast between the attempt at portraiture in the centre and the surrounding margin.

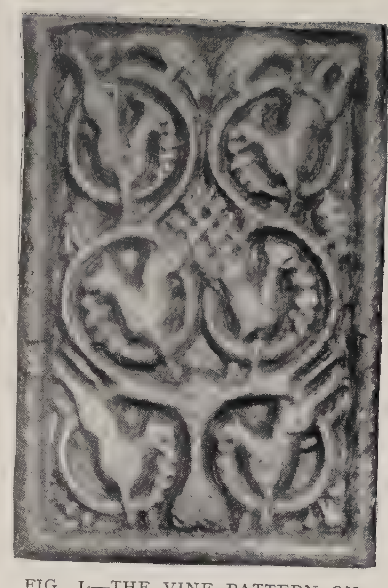


FIG. 1—THE VINE PATTERN ON THE MONASTERBOICE CROSS

FIG. 2—PORTRAIT OF ST. MARK, FROM THE GOSPELS OF SAINT-GALL

Our next section contains concrete representations which, although they do not represent actual scenes of Biblical or hagiographical history, yet convey a symbolic meaning. It is possible here to fall into the Scylla of claiming too much, or the Charybdis of claiming too little. There are some who would read symbolism into every detail of Christian art which they may happen to come across. They make no allowance for the expression of the mere artistry of the artist; they read mystical interpretations even into the mistakes made by rustic masons in setting out the plans of churches. Such an excess of ingenuity very easily becomes so ridiculous that it tempts the critic into the opposite extreme, of denying that the artist meant anything more than the beauty that lies on the surface of his work. As usual, the truth lies between the two extremes; though it is not always possible to say exactly where it lies.

Take, as an example, the figure of the vine, depicted on some of the sculptured crosses, as at Monasterboice (Plate XII Fig. 2). Motives derived from the vegetable world are notably absent from Celtic Christian art; where such a pattern occurs it is natural to suppose that it has some special significance—such as the illustration of the Divine claim, *Ego sum uitis uera*. But, on the other hand, we now know that the vine-motive was introduced to England by the Syrian sculptors who taught the art of sculpture to the Christian artists of that country. This has been clearly shewn by the researches of Brøndsted.[1] This Syrian influence had a vitality sufficient to carry its impetus along for several centuries; it is, therefore, only to be expected that traces of its influence may be occasionally found in regions which it did not directly affect. The vines on the Irish crosses are thus to be interpreted simply as ornament, derived ultimately from the far-distant art-centre which gave to the world the Palace of Mashitta and other notable works.

Doubtless many of the animal figures are likewise merely decorative in their intention. It is unlikely, for example, that any very recondite meaning lies hidden in the grotesque animal figures sculptured on a small cross at Moone (Kildare).[2] Certainly it is impossible to believe in some modern theories about the symbolical interpretation of such figures. In explaining ancient symbolism, we are in the position of one who seeks to decipher an inscription in a forgotten language. Without a bilingual key the Egyptian hieroglyphs could never have been unriddled; we now know that early guesses at their meaning

[1] J. Brøndsted, *Early English Ornament, the sources, development and relation to foreign styles of pre-Norman ornamental art in England*. Translated by R. A. Smith. London and Copenhagen, 1924.

[2] Lord Walter FitzGerald, "On a holed cross at Moone," JRSAI xxix p. 385.

were pathetically futile ; and without the help of some treatise which was followed by the mediæval artists as a guide, our own attempts at divining their thoughts and intentions are not likely to be any better.

In this matter we are not left wholly in the dark. At an early date there appeared, probably in Alexandria, and certainly before the end of the fifth century, a book called *Physiologus*, which treated of the nature and habits of animals, as these were understood at the time. Few books have been translated into so many languages. From its original Greek it has been turned in various guises into Latin, Italian, Spanish, Provençal ; Auglo-Saxon, Icelandic ; Armenian ; Arabic, Syriac, Ethiopic ; and probably into other tongues as well. In a later edition or adaptation, known as *The Divine Bestiary*, it had a powerful influence over the whole Christian Art of Europe. From this book are derived such notions, not yet forgotten, as the salamander which lives in fire, or the phœnix which rises from its ashes ; of the parent lion quickening with his breath the still-born lion-cubs, or of the pelican wounding its breast to feed its young. These and the like aberrations of popular science were not, of course, invented by the author of the book ; they were current in folklore ages before the book saw the light ; he accepted them, derived moral lessons from them, and by the popularity of his book gave them a wide circulation. They were used by preachers to illustrate points in their sermons : lessons, moral and spiritual, were drawn from them. Some of the creatures described in the book were altogether fabulous, as, for instance, the manticora, a terrible man-headed lion which devoured the flesh of men. This monster is depicted at least three times in Irish sculptured art ; on the small cross at Moone, referred to above ; on the base of a cross which remains at Tybrochney (Kilkenny),[1] and on the Romanesque doorway at Killeshin (Carlow).[2] The whole subject of the symbolism of the animal figures in Irish Art, as interpreted with the aid of *The Divine Bestiary*, is as yet a virgin field.

Symbolism is also to be looked for in some of the seemingly secular representations — musicians, hunting scenes, etc.— which are not infrequent upon Irish sculptured crosses. The significance attached to the symbolism is not, however, known to us in the majority of these cases. We may interpret some of them by guesswork, but we have no means of testing the accuracy of our guesses.

[1] H. S. Crawford, " Description of a carved stone at Tybroughney, Co. Kilkenny," JRSAI xxviii p. 270.

[2] H. S. Crawford, " Carvings from the doorway of Killeshin Church, near Carlow," JRSAI xlviii p. 183.

DECORATIVE CONCRETE DEVICES

And, we must repeat, there is no reason to suspect an inner symbolism in many of the concrete objects figured in Irish art. They are merely ornamental. Figures of men and of animals are treated by the artist in the freest possible way (Fig. 15). They are twisted and distorted into knots physically impossible, sometimes almost indistinguishable from geometrical interlacements: indeed, the bodies with which the artist plays are made into mere units of a geometrical scheme. The ideas of the artists regarding the outward appearance of the animals of unfamiliar species are subject to the limitations of knowledge then available; elephants, lions, and other foreign creatures appear in the strangest guise, and impossible composite creatures, such as mermaids and manticoras, are admitted on equal terms with them.[1]



FIG. 15.—Human figures used decoratively: Monasterboice.

The geometrical conventions which affect individual representations affect also pictorial scenes such as we have already described. There is a Psalter in the British Museum (Vit. F. xi) which contains a vignette of King David playing upon his harp. Here every projection is worked off into spirals and interlacements; the chair upon which the royal musician is seated is really the figure of a beast, twisted ingeniously into knots.[2]

The history of the use of animal figures in decoration in Celtic and Germanic art is one of great complication; it has been very fully treated in a masterly study, one of the classics of the history of art,[3] lavishly adorned with illustrations. And

[1] By an odd coincidence the morning newspaper of the day on which I write the final draft of these words—29 January 1927—reports the capture of a "mermaid" off the coast of Natal. "She had a huge tail instead of legs. As a matter of fact she was exactly a woman. Her head was shaped like a human head, and the doctor said her blood was warm, like a human being," and so forth and so forth. It ill becomes us to cast the stone of scorn at the author of the pretty little mermaid which was sculptured on the wall of Clonfert Cathedral, seven-and-a-half centuries ago!

[2] For an illustration of this vignette see J. Romilly Allen, *Early Christian Symbolism*, p. 152.

[3] Bernhard Salin, *Die altgermanische Thierornamentik*, Stockholm, 1904.

as we examine this work, we see once more how all human efforts are hedged about by inexorable law. Even an artist, twisting the figure of an animal into a knot, however much he defies the laws of nature in doing so, cannot transgress the mysterious and subtle limitations of time and space. Each century, each archæological province, has its own conventions, to which the artist must bow so completely that in most cases his work can be assigned to its proper place and time of origin almost as certainly as though it had been signed and dated in plain figures. This is true if we speak in terms of relative chronology; in absolute chronology it is possible to hold diverse views, differing sometimes by as much as a century.

The zoomorphic decoration which, with certain minor individual peculiarities, is common to Germanic and Teutonic art, is ultimately of Oriental origin. The Gothic peoples, whom we find established on the north coast of the Black Sea when history first permits us to know anything about them, were the intermediaries through whom art-motives from Persia and from even further East were transformed and were transferred to the workers in metal, stone, and bone of Eastern and Northern Europe. The Germanic artists especially took kindly to this form of decoration, and developed it wondrously; often it is only by a seriation of types, evolving one from the other, that it is possible to shew that an apparently meaningless interlacing or other pattern is really a complication of the limbs and other portions of an animal, dismembered and rearranged at the fancy of the artist, fettered only by his contemporary *Zeitgeist*. While zoomorphic patterns appear in Celtic work from the first, it is not till near the end of the period that they are used in profusion. It is instructive to compare the pure Celtic work of the Ardach Chalice, in which zoomorphic forms are used with restraint, with the much later Cong Cross, in which they practically monopolize the entire ornament. This late development of zoomorphic figures is undoubtedly due to the influence of the Northmen.

It is convenient to note the distinctions which Romilly Allen, following Salin, has drawn between animal figures in Celtic work and in Teutonic, although it is perhaps questionable whether these are to be accepted as immutable laws. The whole question of zoomorphic decoration in Celtic art requires to be examined afresh in the light of the facts recorded by Salin and others. Romilly Allen's observations are to the effect that in Teutonic animal figures the foot possesses two toes only; in Celtic, three: and in Teutonic figures the caruncle of the eye is either absent (the eye being circular), or in front, *i.e.* towards the profile of the face, while in Celtic figures it is at the other end of the eye.

Abstract Patterns

It is in the abstract patterns, especially the interlacing devices, that a distinction between Celtic and Teutonic work is most easily drawn. The reason for this lies in their difference of origin. Teutonic interlacements are *zoomorphs*, that is, they are derived from the interlacements of animal figures. Hence the bands forming the interlacement are apt to be of varying breadth in different parts of their course, corresponding to the varying thickness of the animal's body; and the lines tend to bifurcate and to run off into free ends, as is natural in plaits derived from the twisting limbs of animal figures. Celtic interlacement, on the other hand, is *skeuomorphic;* that is, it is derived from the patterns produced by a technical process—in this case, by weaving. Therefore, as a rule, the bands are of a uniform width, and neither bifurcate nor (as a rule) terminate in a free end.

Spiral Patterns

But in discussing the abstract patterns found in Celtic art, it is fitting to begin with the oldest group—those founded upon the spiral. This is the only one of the art-motives which survives from the art of the La Tène period. It is questionable whether we can affiliate it to the spirals to be seen in bronze-age sculptures, such as those decorating New Grange or the Mycenæan Tombs; more probably it is an independent product of the Iron Age, ultimately derived from the Classical honeysuckle or anthemion pattern.

Transitional examples, linking the La Tène spirals with those of the latter art-period, have been described by Romilly Allen. These are bowls of metal, decorated with discs having engraved and enamelled ornamentation upon them.[1] This decoration quite clearly shews La Tène reminiscences, as a glance at the numerous illustrations in the paper referred to is sufficient to shew; but they also look forward to the running linked spirals of early Christian art. An excellent example of this transition is a disc which probably formed part of such a bowl, found somewhere in Ireland, and now in the Royal Irish Academy's collection.[2]

It is possible to produce a design for a Celtic spiral pattern in the following manner: Cover the surface to be decorated with a network of dots (Fig. 16 *a*). If the space to be decorated is to be covered uniformly, these dots must form

[1] J. Romilly Allen, "Metal bowls of the Late-Celtic and Anglo-Saxon periods," *Archæologia* lvi part i p. 39.

[2] Figured in *Reliquary and Illustrated Archæologist* xii p. 63.

equilateral triangles, squares, rhombi, or hexagons, as no other figure will cover a surface diaper-wise. Then proceed to link pairs of dots together with curved lines. Only two kinds of curves are possible, C-curves or S-curves, in each of which the loops at the ends of the curves surrounds one of the dots (Fig. 16 *b*). For the purpose of a spiral diaper each dot must be thus connected with more than one other dot, each connexion involving a separate curve. The loops of the spirals that meet round a dot are then coiled together in interlocking spirals. To understand this, take two or more sheets of stiff paper, and roll them up loosely together. The ends of the roll will display a group of as many interlocking spirals as there are sheets of paper, and there will be as many free ends, which can be carried on to repeat the design elsewhere in the diaper. The inner ends of the coiling lines are sometimes connected together with a curve, or are ended off with an ornamental



FIG. 16.—Method of analysis of a spiral pattern.

device. A beautiful effect is sometimes produced by making them end with birds' heads; there is a good example on the Tybrochney stone, quoted above, and another of great merit on one of the crosses at Ahenny (Tipperary).[1] Theoretically, there is no limit to the number of other dots with which each individual dot may be linked; but in practice it would be cumbersome to try to get more than three, or at most four, linkages to any one dot.

The geometrical basis being thus laid down, the pattern can be completed by an ornamental treatment of the component lines, which is sometimes very elaborate (Fig. 16 *c*). But if we remember the simple rules of construction set forth above, the analysis of the most seemingly complex spiral pattern becomes a simple matter. The extraneous ornament must first be stripped off, reducing the pattern to its lowest terms. Then we place on a sheet of paper a dot to represent the centre of

[1] These are both figured in Crawford, *op. cit.* p. 54.

each spiral in the design. We then observe whether the connecting curves are of the C or the S shape, and we connect the dots in our diagram accordingly. It will often be found that two panels which, in their finished form, produce totally different effects, are based upon similar if not identical geometrical frameworks.

But while we can analyse these and the other geometrical abstract patterns in this manner, we must guard ourselves against imagining that the ancient artists went about their work in a manner so mechanical. An expert musician does not compose a fugue in the bricklaying fashion in which he composed fugal exercises during his student days. For each artist, his work has become second nature, and the art pattern, or the fugue, forms itself in his mind by processes of which he is himself hardly conscious.

Interlacing Patterns

Interlacing patterns are found in the decorative detail of Roman mosaics and of Byzantine carved and other ornamented work. But these never make any advance beyond the simplest fret and plait patterns. Square surfaces are decorated with oblique lines running in one direction crossing oblique lines running in another. Long narrow surfaces are decorated with a *guilloche*—that is, three strands intertwining in the manner in which a young girl plaits her hair. The Celtic artists can claim the credit of improving upon such uninspired and monotonous decorations, although they form the foundation of nearly all their patterns, even the most complicated.

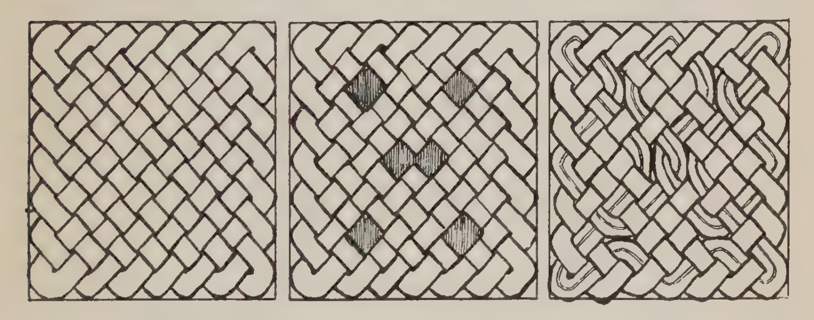


FIG. 17.—Method of analysis of an interlacing pattern.

The process which can be followed in designing an interlacing pattern is as follows: Take a fret of any number of parallel bands running downwards from left to right, crossing a similar number of parallel bands running downward from

right to left (Fig. 17 *a*). Each band crosses alternately over and under the bands which it meets in its course ; and the free ends are united round the margin of the panel. Now select a number of crossings, which should be symmetrically placed in the panel, and there suppose the bands to be cut and re-tied. This can be done in two ways. Let us suppose that two bands, A in the group running down from left to right, and Z in the group running down from right to left, are thus cut at their intersection. Then we have four bands A_1 and Z_1 above the intersection, and A_2 and Z_2 below the intersection. Before the cutting A_1 joined to A_2 and Z_1 joined to Z_2. Now we may either join A_1 to Z_1 and A_2 to Z_2, or else A_1 to Z_2 and A_2 to Z_1. In Fig. 17 *b*, six points of cutting have been chosen, at random except that care has been taken to preserve symmetry. In Fig. 17 *c*, the re-tying has been carried out, in the two lower points according to the first scheme (A_1 to Z_1), in the four upper points according to the second scheme (A_1 to Z_2). The principal band thus produced has been emphasized by a lining of its axis.

Further complications may be introduced by combining circles with the diagonal lines of the original fret, but the principle of construction remains the same. To analyse an interlacing pattern, re-open all the cross ties, and restore the oblique union of the fret-lines. The same processes are followed in constructing and in analysing a pattern founded upon the *guilloche*.

The following principles of construction are observed in all the best work :—

1. A band must cross alternately over and under the other bands which it meets in its course.

2. There must be no useless loose ends in the composition. In poor work loose ends are sometimes tucked away in the hope that the spectator will not notice them. If the artist has any loose ends to spare they must be boldly treated as essential elements in the design : carried out of the panel altogether and either made to unite with the bands of an adjacent panel or finished off with spirals, animals' heads, or what not.

3. There may be any number of component bands in a composition. On the whole, the majority of the best designs consist of one band only ; in these, when the spectator has drawn his finger along the band and returned to the point from which he started, he has traced out the whole complication. There are, however, many excellent designs consisting of several bands. In studying these, it is a good plan to colour a drawing of the design with different tints to indicate the different bands. It is surprising how often the contribution of the individual bands will be found to be unequal and unsymmetrical, even in a pattern which as a whole gives an impression of symmetry.

4. There should be no plain loops ; another line should be provided for the loop to curve around.

5. The pattern should be symmetrical, but not slavishly so. Usually

a crossing over on one side of the pattern corresponds to a crossing under on the opposite side. Much of the art in interlacing patterns consists in the avoidance of mechanical repetition while maintaining a general symmetrical appearance.

6. The panel should always be well filled with the design, and the bands should always be broader than the background spaces between them.

We may sometimes see in an ancient cemetery, in Great Britain or in Ireland, a noble ancient cross and beside it a modern imitation—no doubt commemorating a very worthy person, carved and set up by very worthy people; yet displaying a contrast with the prototype of former times both solemn and saddening. Examination of modern imitations of interlacing work reveals the following faults: A total lack of inspiration, the patterns being mere mechanical imitations—the nemesis of work which is a mere revived corpse, not a living force (much the same may be said of modern imitations of ancient Gothic buildings); contamination with incongruous motives, such as naturalistic or would-be naturalistic foliage; loose ends; rows of plain loops, which look like maps of the route of a performing aeronaut; and a miserable wiriness, due to the pattern consisting of narrow lines running over empty spaces of background.

Key Patterns

For the origin of the key pattern we must go once more to Classical Greece. The various forms of the angular ornament, called, from its frequency in the architectural decoration of Greece, the Greek Fret, are the foundation of the Celtic key pattern. The Greek Fret itself appears to be derived from the spiral patterns of pre-Classical times, the curves being replaced by straight lines, vertical and horizontal. Perhaps this change is due to attempts to apply spiral patterns to the decoration of textile substances.

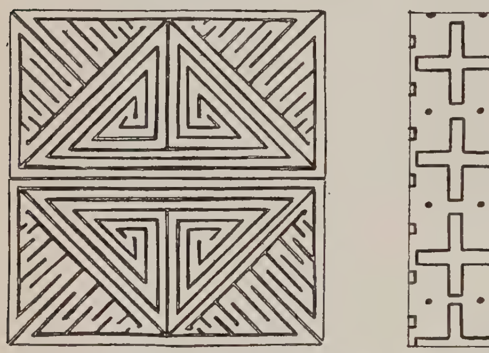
Rectilinear patterns of the kind are sometimes to be seen in La Tène work, though they are far less frequent than curvilinear designs. Good examples of rectilinear work from the La Tène period may be seen on a wooden tub from Glastonbury, on the Turoe House stone already described, and on a sword-scabbard from La Tène itself. Already in La Tène we begin to see the appearance of the essential point of difference between the Greek Fret and the Celtic key pattern. In the former only vertical and horizontal lines are used; in the latter the lines are for the greater part oblique.[1] Indeed, the analysis of a

[1] See O. M. Dalton "Early relations of the Christian Celtic Fret," *Proc. Soc. Antiq. Lond.* xxii p. 215.

Celtic key pattern shews that the geometrical basis upon which it is built up is identical with that of an interlacing pattern; though the effect of the two placed side by side is as different as they well can be (Fig. 18 *a*).

Key patterns are extremely difficult to draw neatly; much more so than interlacing patterns. The difficulty is obviously felt by modern students and practitioners of Celtic design, for key patterns seem to be on the whole rather conspicuously avoided in modern attempts to restore Celtic art in monumental stones, illuminated addresses, etc. The same difficulty seems to have been felt even when this school of art was a living force, for even in otherwise good work the key patterns are often set out with imperfect accuracy.

This classification of abstract patterns into interlacing, key,



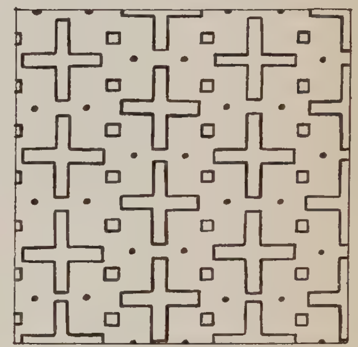


FIG. 18.—A key and a diaper pattern.

and spiral is no mere matter of convenience for the scientific student; it was a real fact in the organic nature of the designs, of which the designers were quite conscious. They are always kept apart; it is very rarely, indeed, that we find different types associated in one design. At Monasterboice the base of the great cross of the Abbot Muiredach is decorated with eight large panels, containing interlacing and key patterns alternately—evidently a pre-arranged scheme. At Termon Feichin (Louth), on the small but well-carved cross that stands in the graveyard there, there is a panel of key patterns enclosing spirals: a rare combination. At Ahenny, Tipperary, one of the fine crosses there has an effective panel in which a design of key-work has, so to speak, had its centre cut out and an interlacement substituted. This is, perhaps, even more unusual.

Diaper Patterns

On the whole, diaper patterns are rare, for the greater part late, and comparatively speaking, ineffective. Groups of chequers enter into the composition of designs in certain pages of the Gospels of Kells ; but it is not till the beginning of the eleventh century that we find large surfaces covered with diaper.

There are several varieties of geometrical basis used in the construction of diapers. The simplest may be called the draughtboard scheme, in which the black and white squares correspond to two alternating elements in the decoration (one of which may be a blank). Other forms are produced by sliding alternate rows of squares, vertical or horizontal, the length of half a square ; or by laying small squares, or small circles, over the intersections of the "draughtboard," thus giving to the original squares a cruciform shape. When the framework thus constructed is filled with the repeated pattern, the guiding lines may be effaced (Fig. 16 *b*).[1]

But, we repeat, the ancient artists when designing a panel probably did not go through the process of drawing out frets and cutting and cross-tying the component lines. We have some material for determining the actual process which they followed in making their preliminary sketches. We have already referred to the cow-bones now to be seen in the National Museum, by means of which we can almost watch the artist at work.[2] He has engraved upon them a number of suggestions, plans for knots as he conceived them in his mind ; in the absence of cheap paper, a commodity not available in his time, he used these bones as tablets for memoranda. In a crannog near Clones a fragment of soft slate was found, upon which were scratched three fragments of interlacing design, and a very rapidly and roughly-drawn S-spiral : it looks like a sketch hastily made to help out a conversational description.[3] In the excavation of Nendrum some thirty such tablets were found, with sketches of ornamental work, figures of animals, letters of the alphabet, etc.—almost certainly the exercises of a monastic school of design.[4]

[1] The student desirous of studying further the analysis of Celtic abstract patterns will find ample material in J. R. Allen, *Early Christian Monuments of Scotland* (Edinburgh 1903). This work contains several hundreds of patterns classified, analysed, and reduced to their original geometrical basis. See also the same writer's smaller book, *Celtic Art in Pagan and Christian Times* (London 1904).

[2] Illustrated, Wilde, *Catalogue* p. 345 ff. : Coffey, *Guide* p. 72.

[3] JRSAI xxx p. 211.

[4] H. C. Lawlor, *The Monastery of Saint Mochaoi of Nendrum* (Belfast 1925) p. 144.

Much more elaborate is a stone slab from Killaloe in the British Museum, the designs upon which show very high technical skill.[1]

A pile of such bones or slates may once have held the germs which, in the hands of a Master, developed into the Chalice of Ardach.

[1] British Museum, *A Guide to Anglo-Saxon Antiquities*, p. 140.

CHAPTER VII

THE EXPRESSION OF DECORATIVE CHRISTIAN ART IN IRELAND

IN this chapter we consider the application of the general principles set forth in the pages immediately preceding, by describing a small selection of the existing specimens of works of the art which is founded upon those principles. We shall consider its three manifestations: Illumination, Metal-work, and Sculpture, in turn and in this order.

ILLUMINATION

The custom of associating painted ornament with a sacred text is one of great antiquity. We find it in Egyptian papyri, especially in the symbolic vignettes interspersed through the amorphous collection of rituals and spells commonly but erroneously called "The Book of the Dead". But there the art of illumination is only embryonic; and there is no evidence that in Classical times it was developed much if at all further. The art of illumination is virtually a creation of the Church: its primary purpose was not so much the illustration as the glorification of the sacred writings with which it was associated. As the book outwardly was bound with covers of wrought ivory and other precious materials, so inwardly its pages were decorated with an ever-increasing elaboration of coloured ornament.

In the oldest illuminated manuscripts, both in the Eastern and the Western Churches, the text and the illustrations are kept apart. The illuminations are attempts to depict the scenes described in the text. As a rule, the scenes selected for illustration are of symbolic or homiletic value, thus emphasizing those portions of the text which from these points of view are of especial importance. At first the idea of making the text itself decorative does not seem to have occurred to the illuminators. They were careful to cultivate an artistic style of handwriting; but they did not torture the letters into knots so intricate that it almost requires a previous familiarity

with the text to decipher them. The use of abstract ornament arising out of the letters of the text begins to appear about the sixth or seventh century. It is first seen in Byzantine MSS.: it influences the MSS. of the Carolingian school: and it is a radical principle underlying the decoration of the Irish MSS., in which figure subjects take a subordinate place.

We have already seen, in Chapter IV, that the letters used for writing in pre-Christian Ireland must have been the ordinary Roman capitals, with or without some few omissions or other modifications. The characters used for writing manuscripts of the Christian period were modifications of the Roman cursive hand of the third or fourth centuries. This form of writing, once developed, became marvellously stereotyped. Although the few scholars who have paid special attention to Irish palæography have detected differences between the handwriting of different scribes, and have noticed, for example, that several different writers contributed to the compilation of some of the great codices, yet it has proved impossible to formulate principles whereby otherwise undated MSS. can be assigned to their proper century by the handwriting alone. The same hand persists through many hundreds of years.[1]

In the make-up of the book the vellum was folded into gatherings, but very irregularly. Even in one single volume there is a varying number of sheets in the gatherings, and often there is a half-sheet interposed, with no conjunctive leaf on the other side of the fold. Not very much care was taken in the selection of the vellum; there are numerous sheets with holes, tears (stitched with threads of vellum), and other imperfections. This, however, does not apply to the important illuminated manuscripts, the material for which was much more carefully chosen. Guide-rules were impressed by the scribe on the surface of the vellum with a pointed instrument which made an indentation, not a mark, on the surface. In using these ruled lines, the scribe was apt to align the *upper* part of his writing to the *lower* side of the guide-lines—unlike modern usage, which aligns the *lower* part of the writing to the *upper* side of the guide-lines. Vertical marginal lines were also impressed in the same way, to secure that the columns should have truly straight sides. Words at the ends of lines were divided as the space available dictated: there was no obligation on the scribe to respect their syllabic division.

[1] From this point of view one of the most interesting MSS. is that of the *Annals of Inisfallen*, now in the Bodleian Library. This document was written all at once up to a certain date, and kept posted up in subsequent years by many different successive hands. A publication in facsimile of this book would be of great palæographical value.

Partly for economy of vellum, and partly to obtain an æsthetic appearance of uniformity in the written pages, the blank spaces at the ends of paragraphs, stanzas of poetry, etc., were filled up with an overflow from the next section. Thus, an ancient Irish scribe would write the opening stanzas of Goldsmith's *Hermit* in some such manner as this :—

Turn gentle hermit of the dale and gui
de my lonely way to where yon taper ch
eers the vale with hospitable ray) (fai
For here forlorn and lost I tread with
nting steps and slow where wilds immea
surably spread seem lengthening as I go

and so forth.

The ink used was a decoction of galls, which in most cases has retained its intense blackness until the present day. Sometimes an inferior ink was supplied in the monastic *scriptoria*, and this has faded to a brownish colour. Complaints of bad ink and bad pens are sometimes scribbled on the margins of manuscripts. A sixteenth-century student engaged in copying extracts from the great manuscript called "The Speckled Book" was especially troubled. On page 17 of the manuscript he wrote *O Mary, help the ink!*—justifiably, for it is of a very poor faint brown colour. Later, at page 141, we find, *O Mary, are you better now?* At page 197 he lost all patience, and broke out in these words, *My God, do you still serve us for ink? I am Cormac son of Cosnomach, testing it at Dun Doighre* (Duniry, Galway) *and I'm afraid that we'll get great annoyance out of this ink. Anno Domini*, 1575. Incidentally we may remark that there is much of human nature in these and similar marginalia, although many of them are extremely tantalizing. What was the trouble in the monastery which induced one student to write a heartfelt *Thank God I was not in last night?* And why did another student write *Brian is a naughty boy?* There is a manuscript miscellany of legal and other matters now in the British Museum Library, which was written by a jurist named Domhnall ó Duibhdabhoireann—a name that would be Anglicized "Donal O'Davoren"—in the sixteenth century. It contains a marginal note which shews that one of the most fruitful sources of trouble for literary men is no new thing: *My curse, and God's curse in addition to it, be on the women who have disarranged all my ink, and my colours, and my books. And God's curse be on anyone who reads this and who doesn't curse them. My God, this is a bad job!* Donal seems to have possessed what in modern jargon is known as a temperament. He had some justification, however, for his womenkind took unpardonable liberties with his papers. Soon after he had

thus relieved his feelings one of them, prying inquisitively, discovered this note, and wrote in the book a couple of pages later: *I'm not the woman, Donal!* [1]

To return to more serious matters. The decorator drew freehand, so far as we can see; for there is no trace of anything analogous to the preliminary pencillings of a modern artist. Having outlined his decorations, he filled them in with the following colours: Tyrian purple, gold dust (rare), vermilion, orpiment (bisulphide of arsenic), malachite (carbonate of copper), copper green, and badly-made and gritty ultramarine.[2] The use of Tyrian purple is especially interesting. With regard to this colour, Dr. Laurie makes the following remarks: "According to Bede,[3] the Irish monks knew the secret of preparing the dye from the *Purpura* shell-fish, which is found on the Irish and English coast. This beautiful purple is found on Byzantine, Irish, and Carlovingian manuscripts, and is quite unmistakable. Its presence in Carlovingian manuscripts is easily accounted for, as it was probably brought by Byzantine artists, but that the knowledge of how to prepare it existed in Ireland is certainly curious, and seems to point to a very close and direct connexion between the early Irish Church and the Greek Church, as Byzantium would necessarily be the home of the manufacture of classical pigments." Later in the same paper Dr. Laurie makes especial reference to a manuscript from Winchester, which is the one exception to his rule that Tyrian purple is not found in English manuscripts later than the eighth century. This manuscript is of the thirteenth century, and is now in the National Library of Scotland (formerly the Advocate's Library). The nature and contents of the manuscript are not specified in Dr. Laurie's paper: but the essential fact about it is that the whole manuscript is English in style and in pigments, *except one initial letter*, which is in the Irish style, and which is illuminated with Tyrian purple and the characteristic bad ultramarine of Irish MSS. It seems as though some travelling monk from Ireland, carrying

[1] S. H. O'Grady, *Catalogue of MSS. in the British Museum* vol. i p. 122. For a large collection of these notes, see Rev. C. Plummer, "On the colophons and marginalia of Irish scribes" (*Proceedings* British Academy, vol. xi). See also Dom Louis Gougaud, *Les Chrétientés Celtiques* p. 332.

[2] See A. P. Laurie, "Ancient pigments and their identification in works of art," *Archæologia* lxiv p. 315: *Idem*, *The Pigments and Mediums of the Old Masters* (London 1914) p. 78.

[3] Dr. Laurie refers us to Middleton's *Illuminated Manuscripts* for this quotation; but Middleton gives us no help to finding where it occurs in the writings of Bede himself. I have vainly hunted for it in all the likely places I can think of, and in the indexes to various editions of Bede's works. It should be noted that in *Hist. Eccl.* I i Bede does not appear to recognize this Irish monopoly; he speaks of shells found on the coast of *Britain* which yield an excellent purple dye.

his paint-box, was allowed to illuminate one letter of this manuscript, in return for hospitality received. Whatever may be the truth about the elusive passage in Bede, the table of the distribution of colours in MSS. from different regions, given by Dr. Laurie, is certainly corroborative of the thesis of an Irish monopoly in Tyrian purple.

We may now proceed to a description of some of the most important of the illuminated manuscripts that have survived to our own time. We are here concerned with their art only, not with their contents. The great compilations of secular literature, of which the oldest existing is *The Book of the Dun Cow* [1] (*c.* A.D. 1100), do not concern us here. These are seldom enriched with illumination, other than an occasional pretty initial letter, and on the whole they are of a date later than the period which we are studying, although they are founded on much older materials, now lost. It must be admitted that books were not guarded in ancient libraries as carefully as they ought to have been. Books have been lost through military and civil commotion, as when the Víkings and Henry VIII plundered the monasteries; as when Raglan Castle perished in Cromwellian times with a great collection of Welsh MSS., if tradition speaks the truth; or as when the Dublin Record Office passed into history at the end of June, 1922. But probably as many books have vanished piecemeal under the thumbs of assiduous readers, who pawed over their leaves with fingers of mediæval uncleanliness, cut out leaves, touched up—not always accurately—faded passages, and scribbled marginalia like those which we have quoted; these last have now acquired the interest of antiquity, but in their own time were as inept as the annotations in the books of a modern circulating library. Within modern times some of our MSS. have suffered severely from the injudicious use of messy reagents.

But our special concern is with the gospel-books, psalters, and service-books, written for the use of the Church. To some extent the contents of these manuscripts are stereotyped; but they still present large scope for study, even from the literary standpoint. The few Irish missals that have survived are of no little liturgiological interest; [2] and the gospel-books shew that the history of the scriptural text current in Ireland was one of no small complexity. Thus, while the *Book of Durrow* is a Vulgate text of great purity, the *Book of Kells* presents a mixed text, Old Latin and Vulgate, the textual criticism

[1] So-called from the animal of whose skin the vellum was said to have been made.

[2] See F. E. Warren, *The Liturgy and Ritual of the Celtic Church* (Oxford 1881) on this and allied subjects.

of which is highly complicated. The difficulty lies in this, that the manuscripts which we possess were conserved on account of their rich illuminations. They cannot have been intended for general use, if only for the practical reason that it is not always easy to read them without previous knowledge of the text, so much is the eye confused with their elaborate decoration. Such a book would be as much a treasure as a golden cup, and it would be kept as carefully. For common use there were plain rapidly-written manuscripts, and these have been worn out by constant handling. If we had a few more of these simple codices, the criticism of the text would be much easier.

A gospel-book or other manuscript which has been the property of some distinguished saint or ecclesiastic acquires the virtues of a relic, like his bell or his bones. But the preservation of such a relic does not necessarily imply its gentle treatment, or its being issued to readers under the strict supervision that is, or ought to be, the rule in a modern library. Quite the contrary. In such cases the books were not preserved to be read at all. Their special virtues as books were eclipsed by the thaumaturgic powers with which they were credited, in virtue of their connexion with a notable holy man; and in consequence they were treated with a barbarity almost incredible. Strips were cut from them to make amulets; water was poured over them and given to sick men or animals to drink, on account of their supposed healing power—especially if the books were the work of the noted scribe St Colum Cille.[1] Irish manuscripts were especially valued in England, for scrapings from a book belonging to a land free from serpents, given in a drink of water, acted as an antidote against the venom of snake-bite.[2] Fragments of a book which has evidently been submitted to such drastic maltreatment survive to tell their pathetic tale. This is the falsely so-called *Gospels of St Patrick*, which was found enclosed in the shrine called *Domhnach Airgid*, "the silver shrine".

The Domhnach Airgid is a reliquary in the form of a box, which was preserved down to the beginning of the last century at Brookborough, Fermanach. It was supposed to contain certain very sacred relics, notably a lock of the hair of the Blessed Virgin. The hereditary keepers of the shrine—descendants of the Earl of Enniskillen executed after the rising of 1641—made profit by hiring it out in the neighbourhood, either that its touch might cure disease in men or in cattle, or else that persons accused of crime might take over it an oath of compurgation. Such an oath was never perjured:

[1] *Annals of Clonmacnois*, ed. Murphy, p. 96. [2] Bede, *Hist. Eccl.* I i.

Carleton has a story of the use of the shrine for such a purpose.[1] In 1830 it was purchased from the last survivor of the family in whose keeping it was, and it is now in the library of the Royal Irish Academy.

The shrine has an outer case of silver inscribed with a statement to the effect that it (the outer case) was made by "Iohannes O'Karbri," who describes himself as "Successor of Tigernach"—that is to say, abbot of Clones. This dignitary is known to have died in the year 1353; the inscription therefore shews that the shrine was in the possession of the monastery of Clones in or about that year. But the name *Domhnach Airgid* properly belongs to a shrine, which had been left by the Apostle of Ireland at Clocher, and which was long preserved among the chief treasures of that house. The shrine was said to have come down to St Patrick from Heaven; and in the Life of St Mac Cairthin, bishop of Clocher, with whom St Patrick left the shrine, its contents are enumerated as being relics of the Apostles, fragments of the True Cross and of the Holy Sepulchre, and a lock of the Blessed Virgin's hair—as we have seen, the tradition about the last relic persisted down to modern times.

But when the shrine was opened in the Academy's office, no such relics were found within it. It contained the distorted fragments of a book, which had been crushed into the box. The leaves were glued together, probably as a result of water having been poured over it for some such purpose as is indicated above; and the activity of the shears, clipping strips from them, is clearly to be identified. When it proved possible to open out the poor fragments which remained, it became clear that the box could not possibly have been made for the book, for the width of the book's pages is greater than that of the inside of the box. Unless the book had been forcibly rolled into a ball, it could never have been got into the box at all. We must therefore infer that the book was a relic of some eminent saint, who had possessed it: that thaumaturgic powers were credited to it: and that so great a demand for amulets cut from it had been made, that at last its owners realized that nothing of the original book would be left. They therefore shut it up in the shrine, and preserved it as a relic in their treasury.

But who was the saint who had owned the book? The story of St Patrick having presented the Domhnach Airgid to Clocher has led to the idea that the book belonged to St Patrick himself, and this, with all the chronological implications which it involves, is accepted without question in some of the older works on Irish Art, such as those of Miss Margaret Stokes.

[1] "The Donagh" in *Traits and Stories of the Irish Peasantry*, second series.

There is a second inscription on the existing shrine, of which Dr. Petrie could read only the concluding word, CLOACHER. This, so far as it goes, seemed to confirm the tradition of the connexion of the shrine with Clocher. But unfortunately the reading—in any case a most improbable way of spelling the name of the place—is quite erroneous: since Petrie's day it has been completely interpreted, as an invocation of the names of the Three Kings, set forth thus :—

IASPAR—[IHC]—MELCHIEAR BA—[IHC]—LDASAR

Petrie's CLOACHER being a misreading of the letters following the second IHC.[1]

Thus all the evidence for the association of the existing shrine with Clocher vanishes. The real Clocher shrine has disappeared—doubtless looted with the rest of the treasures of the monastery by the emissaries of Henry VIII. The existing shrine is a Clones shrine, of whose history we know nothing beyond what its inscription tells us, and which was used from the first to enshrine the gospel-book which it contains. All these objects have a family resemblance ; and it is not difficult to imagine the Clones shrine becoming mistaken for the much more sacred Clocher shrine, in the confusion following the suppression of the monasteries.

The condition of the manuscript is so bad that it is difficult to form any real conception of its original appearance. It probably comes early in the series of illuminated gospels : but it ought never to have been taken for the property of St Patrick, for the simple reason that it is certainly a Vulgate text, whereas the frequent scriptural quotations in the writings of St Patrick shew that he used the Old Latin version. There are some faint traces of ornamentation, shewing spiral coils, executed, so far as can be made out, in black ink only, and of inferior merit. There is also a rude and almost untraceable drawing of the evangelist St Mark.

A shrine very similar to the so-called *Domhnach Airgid* encloses the manuscript known as the *Cathach*—a hereditary possession of the O'Donnell family (the family which counts St Colum Cille among its most distinguished members). It was long preserved as a battle-talisman, whence the name (Irish *cath* = " battle "). The manuscript is a Psalter, but without illuminations, except well-drawn initial letters that have been decorated with colour now nearly effaced. There is a tradition that this is the very book which indirectly led to St Colum Cille's mission to Scotland, according to the well-

[1] See the paper on this shrine by Very Rev. Dr. Lawlor and E. C. R. Armstrong, PRIA xxxiv p. 96. For the MS. see TRIA xxx p. 303.

known legend. Told briefly, it is to the effect that Colum Cille surreptitiously copied a manuscript belonging to St Findian, against the wishes of the latter: that St Findian demanded the surrender of the copy, and, in modern language, brought an action before the king of Tara for its recovery: that the king gave judgement against Colum Cille: that the latter stirred up his own people, the hereditary princes of the Ulaidh in the North, to avenge the insult: that in consequence the battle of Cooldrevin was fought, where many were killed: and that Colum, stung by remorse, sought the counsel of his Confessor, who imposed upon him the penance to exile himself to Alba, and there to remain until he had converted to the Faith of Christ as many of the heathen as had been slain in the battle. A difficulty in the way of accepting the identification as authentic is the fact that the Cathach is a Psalter, whereas the book of St Findian is said to have been a Gospel-book. On the other hand, it has been shewn [1] that the book was written by a good scribe under pressure of time, and that while it presents a Vulgate text the scribe's head is evidently full of the older "Old Latin" version. This would accord with the only plausible explanation of Columba's desire to copy that particular manuscript: namely, that it was the first, or one of the first, manuscripts of the then new Vulgate version to reach Ireland, and that the saint was naturally desirous of securing a copy for leisurely study.

The book called the *Book of Dimma*, now in the library of Trinity College, Dublin, is alleged—though the story has been questioned—to have been found in its silver-mounted shrine, carefully concealed in a cave in the Devil's-Bit Mountain (Tipperary). If the story is true, it was probably deposited for temporary safety by some inmate of the religious house of Roscrea, to which it had belonged. The manuscript is a small quarto, containing a copy of the Four Gospels, full of errors, as well as a copy of the Mass for the Sick. It is adorned with miniatures of the first and third evangelists, and a representation of the symbol of the fourth; it has also ornamental initial letters, and marginal borders decorating the opening pages of each gospel. The artistic gifts of the scribe were superior to his literary qualifications.

The scribe's name is given as *Dimma mac Nathi* in a note repeated more than once in the book: and in consequence the book has been identified with one, said to have been written in a miraculously short space of time for Cronán, the founder of

[1] By Dr. Lawlor, in his exhaustive study of the book entitled *The Cathach of St Columba* PRIA xxxiii p. 241.

Roscrea, by a certain scribe of that name. And this identification is just what was intended by the worthy brethren of Roscrea. For Dr. R. I. Best has recently discovered that the name of Dimma is in every case written in a later hand over an erasure. In order to give the book the spurious value of having been miraculously produced, and having been in the possession of their great founder, the real name of the scribe was erased, and that of Dimma, the scribe named in the story of the miracle, substituted. Unfortunately, the good monks did not notice that the real scribe mentioned that he had executed the work for some now unknown personage called Dianchride: to complete their underhand transaction, they should have abolished him also, and substituted the name of Cronán. In the words of the purveyor of moral maxims for the nursery,

> Oh, what a tangled web we weave,
> When first we practise to deceive![1]

The *Book of Moling* is a similar volume, also preserved in Trinity College: and it may well be what it claims to be, the autograph of the Bishop of Ferns, whose name it bears, and who died about the end of the seventh century. If so, it is one of the oldest of the gospel-books surviving from Celtic Ireland. It is also possible either that it was written by an otherwise unknown scribe of the same name, or that it was copied, colophon and all, by an unknown writer from a MS. actually written by the bishop. We shall see a remarkable parallel to this in the *Book of Durrow*, afterwards to be described.[2] There are three portraits of evangelists now bound up into the book, but they do not appear to belong to the volume; they have come from some other, now unknown, MS. Dr. Lawlor, in the first chapter of his monograph on the manuscript, has shewn reason to believe that the book was originally in four separate volumes, each containing a Gospel.

One such separate Gospel survives, a copy of St John, written by a scribe called Sonid, who has written his name in Ogham letters at the end. There is a miniature of St John, and some slight border ornament. The manuscript is now bound up with an important missal, one of the few liturgi-

[1] For a summary of what is known of the history of the book, with facsimiles of its handwriting, see R. I. Best, "On the *subscriptiones* in the 'Book of Dimma,'" *Hermathena* xx p. 24. Dr. Best dates the MS. to the end of the eighth century, and the forgery to the tenth or eleventh. There are good facsimiles in Zimmermann, *Vorkarolingische Miniaturen* (Berlin 1916), plates 195, 196.

[2] This is the view adopted by Dr. Lawlor in his monograph on the manuscript (*Chapters on the Book of Mulling*, Edinburgh 1897 p. 16), but considerably modified in an Appendix at the end of the same volume. See Zimmermann, *op. cit.* plates 194, 196 for facsimiles.

cal manuscripts that have survived from the ancient Irish Church.[1] It is known as *The Stowe Missal.*

From the artistic point of view the *Book of Armagh* is of little interest, though it is of great historical importance. Its contents include the only complete Irish copy of the Latin New Testament, as well as the most authoritative copy of the writings of St Patrick and of documents relating to him. The date has been exactly determined from internal evidence ; the writing of St Matthew's Gospel in the New Testament was begun on the Feast-day of that Evangelist, 21 September, A.D. 807. The script is beautiful, and there are well-drawn capital letters, but little ornament. The text of this volume with some facsimiles has been published by the Royal Irish Academy.[2]

The manuscripts which we have now summarily described are but foretastes. They contain a minimum of decoration —more or less elaborate initial letters to each gospel, and an attempt at portraying the evangelist (or denoting him by his appropriate symbol) at the beginning of the book that bears his name. The ninth century was the great period of illuminative art—a noteworthy fact, for we should have expected that there would have been too much disquiet in the monastic schools during that period, when the Víkings were carrying on their barbarous raids. The dating of some of the more important manuscripts is unfortunately rather uncertain, and much further research is needed, both in their artistic and their textual criticism, before we can feel assured on their chronology.

We have lost one manuscript which must have ranked among the greatest of all. This was the *Gospels of Kildare*, described by Giraldus (*Topographia Hiberniae* II pp. 38, 39). He saw it in the year 1185 ; and his glowing enthusiasm is pleasant reading, set, as it is, in a book not any too friendly to Ireland. The passage has often been quoted ; but it is not amiss to recall it here, if only because it so well expresses the wonder with which we ourselves must contemplate these miracles of skill.

" Among all the wonders of Kildare nothing strikes me as more miraculous than that wonderful book, written, as they say, under an

[1] The missal has been published in facsimile by the Henry Bradshaw Society. See also the study by Rev. F. E. Warren, in *Proceedings Soc. Antiq. Lond.*, Ser. II vol. viii p. 419 : by Rev. J. H. Todd, PRIA vi p. 393: and by Rev. B. MacCarthy, TRIA xxvii p. 135. Another Irish Missal has been published (with photographic facsimiles) by Rev. F. E. Warren, *The Manuscript Irish Missal belonging to . . . Corpus Christi College, Oxford*, (London 1879).

[2] It may be worth noticing in passing that the editors of this publication have missed a reference to this book in a diary of travel-notes in the North of Ireland made by Sir Thomas Molyneux, who saw the book in 1708 in the possession of its then owner, Mr. Brownlow of Lurgan. Molyneux was told that it was a copy of the Bible in the handwriting of St Patrick, but received the information with some doubt. The passage is printed in BNHPS (1874-75) p. 35. Facsimiles in Zimmermann, *op. cit.* plates 206, 207. On the date of the book see PRIA iii pp. 316, 356.

angel's dictation in the time of the Virgin [Brigid]. This book contains the four Gospels agreeing with the version of Hieronymus, and in it there are almost as many different figures as there are pages, highly adorned with various colours. Here you may see the Face of the Divine Majesty, admirably expressed: here the mystic symbols of the Evangelists, now with six, now with four wings, now with wings twain—here the eagle, there the calf; here the face of the man, there of the lion; and other figures, almost endless. If you look on these superficially and in the usual way, with less attention, they will seem a blot (*litura*) rather than a knot (*ligatura*): you would not expect any ingenuity, where, nevertheless, there is nothing but ingenuity. But if you were to apply keenness of vision to a closer scrutiny, and concentrate much more deeply into the secrets of the art, you will be able to observe intricacies so delicate and ingenious, so strict and artful, so intricate and interlaced, and illuminated with colours still so fresh, that verily you would say that these were all combined by the diligence of an angel rather than of a man. For my part, the more often and carefully I look upon it, I am ever astonished anew: I ever find food for wonder."

Giraldus then goes on to tell of a tradition, which doubtless he heard at Kildare, to the effect that the artist wrought to models presented to him in visions by an angel, St Brigid the while interceding for him that his hand might be given skill to copy the pattern thus set before him. The story need not be *all* legend. It is psychologically quite possible that a designer whose whole heart and soul were concentrated on the task of illuminating a book of the kind might have had vivid dreams in which ideas for the decoration presented themselves to him: the unconscious working of the mind, in dreams and otherwise, to solve problems that have baffled the voluntary efforts of the mind's owner is a not infrequent phenomenon. It is also to be noticed that Giraldus was at first repelled by some of the designs, and that it was not till he examined it more minutely that their full wonder was revealed to him. This is exactly the effect which a manuscript of this school makes on a modern observer. At the first sight he is repelled by the seeming feebleness of the figure-drawing; it is not till he looks again, and more closely, that he begins to realize the consummate mastery of "line" which the artists enjoyed; their almost miraculous eyesight; and their all but superhuman minuteness of accuracy of detail.

The Kildare book is, however, lost to us, no doubt for ever. But we possess a few other books which help us to realize how heavy the loss has been.[1]

The *Gospels of Mac Riaghail*, otherwise called the *Rushworth Gospels*, from the name of a former owner by whom it was

[1] The fact that the Gospels of Kildare was a Hieronyman text (like the Gospels of Durrow, but unlike the Gospels of Kells) forbids us to identify it with the Kells volume, as some have done—quite apart from the total lack of evidence that the Kells book was ever at Kildare.

placed in its present resting-place (the Bodleian Library) claims to have been written by a scribe called Mac Regol or Mac Riaghail, identified with a scribe and abbot of that name belonging to Birr (Offaly), who died in the year 820. Unlike the manuscripts which we have been describing, this book has large pages, and they are sumptuously decorated with geometrical and zoomorphic interlacements, and other devices. The bulk of the text is in a beautiful rounded hand, which was almost always used in the best manuscripts: and the opening words of each gospel are so elaborately inflated with ornament that they fill an entire page. Miniatures of the evangelists precede their books, as usual. The text is a mixed version, analogous to that of the Kells volume. Artistically, the book does not rank so high as the best of the manuscripts of the school; some of the decorations are hastily executed, and the spirals are especially rough. The artist prefers light colours, and his work in this respect presents a contrast to the more sombre pages of the Kells volume.[1] It must be noted that the book found its way to England about the tenth century, when an interlinear translation in the dialects of Northumbria and Mercia was written over the whole volume.

Another manuscript of the series which has wandered from its home is the book of the *Gospels of St Chad*, preserved in Lichfield Cathedral. That this manuscript is Irish is obvious: the character of the handwriting and of the ornament, as well as the nature of the text and the orthography and setting-out of the words leaves no room for doubt in the matter. The tradition that it was the handiwork of the Welsh ecclesiastic Gildas cannot claim any authority, and would give to the book an impossibly early date. All that is known of its history is to be deduced from certain entries written within it, in Latin, Welsh, and Saxon. From these we learn that the book was in the possession of one Cingal, from whom it was bought by Gelhi, son of Arihtuid; the price paid was Gelhi's best horse. The purchaser dedicated the book, for the redemption of his soul, to God and St Teilo, the patron of Llandaf. The book had somehow become transferred to its present resting-place before the death of Leofgar, Bishop of Lichfield, in 1021; for there is another entry to the effect that a certain Godwin, son of Earwig, purged himself of a charge of immorality in the presence of that dignitary—presumably by an oath on the sacred volume. The book is probably early in the series;

[1] On this MS. see Rev. S. Hemphill, "The Gospels of Mac Regol of Birr," PRIA xxix p. 1. The text along with that of the Lindisfarne book forms the subject of four volumes of the Surtees Society Publications. See also Zimmermann, *op. cit.* plates 199-204.

the illuminations are not of the perfection of the best examples, the figure-drawing being especially poor.[1] The latter portion of the book, from St Luke iii 9 onwards, is lost, and with it whatever colophons might have told us of its origin.

The *Gospels of Durrow* shares with the *Book of Lindisfarne* and the standard *Codex Amiatinus* the merit of being an important codex of the Vulgate, the text of which it presents in a notable purity, as well as being a great work of illuminative art. In excellence of execution it lies between the Rushworth and the Kells volumes. It may possibly have been copied from the very book of Gospels which St Colum Cille surreptitiously transcribed ; [2] for the writer has transferred from his exemplar a note which cannot apply to the MS. before us. Translated it reads : " I pray thy blessedness, holy presbyter Patrick, that whoso shall take in hand this book may remember Columba the writer, who have written for myself this Gospel in the space of twelve days, thanks to our Lord." It is impossible that this book, with its advanced style of illumination, should be as old as Columba's time : it is improbable that a book which professes to have been made for private use should have been so lavishly decorated : and it is merely grotesque to say that the *Book of Durrow* was written in twelve days—many of the single pages probably took as much time as that to complete.[3] The book was enshrined, as a note on one of its pages informs us, under the auspices of Flann (King of Ireland, A.D. 877-914) : it was therefore already a treasured relic at that time.

Probably from a rather later date in the same century is the *Gospel-book of Kells*, the costliest relic of art which has survived in Ireland to our time. Something has gone from the beginning and end, and a careless bookbinder has earned for himself perpetual execration by his treatment of the margins, but otherwise the book is in good condition. We must regret that by losing the last page we have probably lost a colophon which might have told us the name of the writer : we do not know how to call one of the greatest artists who has ever lived.

Almost every page has some decoration, if it is only one of the initial letters, which shew that our artist possessed, among other qualities, a quaint, freakish sense of humour. Even in

[1] A lithograph from the book will be found in Westwood's *Palæographia sacra pictoria* (London 1843-45). There are three photographs reproduced in F. H. A. Scrivener, *Codex S. Ceaddæ latinus* (Cambridge 1887), which is otherwise confined to a collation of the text. Zimmermann, *op. cit.* plates 245, 246.

[2] Assuming that text to have been a gospel-book, as indeed the tradition asserts, and not the Psalter described above.

[3] Photographic facsimiles from the *Book of Durrow* will be found in Stanford Robinson, *Celtic Illuminative Art* (Dublin 1908) : Zimmermann, *op. cit.* plates 160-5.



PART OF THE *CHRISTUS* MONOGRAM IN THE *GOSPELS OF KELLS*
(GREATLY ENLARGED)

his *chef d'œuvre*—the great monogram of the name of Christ at the beginning of St Matthew's gospel—he has found a corner in which to fit a sketch of a couple of cats interfering to protect the sacred Host from mice. But if there were never a line of ornament in the whole book, it would still be a joy to contemplate, so neat and uniform is the lettering of the text. There is a number of full-page miniatures illustrating the subjects of the text, and minor flourishes filling up blank ends of lines, as well as the ordinary subjects—the portraits of the evangelists, and the enrichment of the opening words of each gospel. The text, on the whole, seems to have been written first, blanks being left for the subsequent addition of the illumination. Some of the initial letters were never finished; and certain pages are evidently the work of another scribe, skilled, but not great. Perhaps the chief artist died before his work was accomplished; quite possibly he lost his eyesight, as a result of the tremendous strain to which he subjected it. Every resource of Celtic art is drawn upon, and, as it were, exhausted—frets, spirals, interlacements, zoological figures, tesselated and diaper work, rosettes, foliage. The last-named appears in the form of lightly-sketched branches with leaves, sometimes rising from vases, or else of a foliage-treatment of the tails and the tongues of animals.

The language of eulogy is powerless to do justice to this marvellous volume; to the patience of the artist, and to his absolute accuracy. Never a fault has been detected among the millions of crossings in the knot-work; never a broken or a spluttering line. The accompanying illustration (Plate XIII) represents a small portion of the "Christus" monogram greatly enlarged. The original would be more than covered by three postage stamps.[1]

There can be little doubt that this is the book which is mentioned in an entry of the *Annals of the Four Masters*, under date 1006:[2] "The great Gospel of Colum Cille was blackly stolen in the night out of the western sacristy of the great church of Kells. This was the chief treasure of the west of the world, by reason of its beautiful shrine. It was found two months and twenty nights thereafter, bereft of its gold, with a sod over it." It is curious that the authority on which the annalists drew does not seem to have appreciated the value of the illuminations. The shrine of the book must have been

[1] I have seen it passing triumphantly through the severe test of enlargement, with a magic lantern, to about 3000 times. Some other interesting enlargements of this kind will be found in Stanford Robinson, *op. cit.* A very useful series of facsimiles in colour has been published by *The Studio*, under the editorship of Sir E. Sullivan (London 1914). See also Zimmermann, *op. cit.* plates 166-84 *bis*.

[2] The same entry appears in the *Annals of Ulster*.

worthy of it ; the gold tempted the thief, who no doubt melted it down as soon as possible after he laid hands on it. The MS. he could hardly dispose of, and we should like to have some more particulars about how it was "found". Did the thief himself convey back-door information as to where it lay, in order to divert from himself the operation of an ecclesiastical curse ?

The present is not the place for controversy, and I shall do no more than profess myself still of the opinion that the so-called *Gospels of Lindisfarne* is likewise of Irish workmanship. Briefly, the facts about this enigmatical manuscript are these : The book, which is preserved in the British Museum, is the only one of those described in these pages worthy to stand on the same shelf with the Kells gospels. If anything, it is even more "Celtic" than the Kells book, for it avoids floral work in its decoration. Like the Durrow book, it is a good Vulgate text. That especially Irish pigment, Tyrian purple, is among the colours used by its artist. Like the Rushworth book, it has been in Saxon hands, and a glossator called Aldred, a monk of Lindisfarne, whose date is assigned to the tenth century, wrote an interlinear translation in the Northumbrian dialect. Like all the great Irish manuscripts of the ninth century, its decoration consists of ornamental expansions of the lettering, and of portraits of the evangelists. The figure-drawing of these portraits is much better than usual, evidently because the artist has come under the influence of a foreign model : he has written the names of the persons portrayed in Greek, suggesting that he has had upon his desk a Greek pattern to follow. The pigments used are light, like those of the Rushworth book ; a page of the Lindisfarne book looks much brighter than a page of the Kells book ; but otherwise the two books might almost have been written in the same scriptorium, so identical is the character of their lettering and of their ornament.

Where, then, lies the enigma ? It is a note which the glossator, Aldred, has appended to his work. At the end of the fourth Gospel he writes words, the beginning of which may thus be translated : "Eadfrið, bishop of Lindisfarne, wrote this book in honour of God and of St Cuthbert, and of all the company of saints in the island ; and Eðelwald bishop of Lindisfarne made an outer case and ornamented it, to the best of his power ; and Billfrið the anchorite wrought the metal work of the ornaments on the outside . . . and I, Aldred, the unworthy and most wretched presbyter, by the help of God and St Cuthbert, have over-glossed it in English." Now Eadfrið was Bishop of Lindisfarne from 698 to 721, and Eðel-

wald succeeded him in office; and if these dates are to be accepted, we must suppose that this manuscript is about a hundred years older than any of the other manuscripts in which the art reached its highest perfection. We must suppose that this Saxon bishop became so expert in a phase of art which was foreign to him that he surpassed those to whom it was native. These are indigestible morsels to swallow; it is surely much more reasonable to ask upon what authority Aldred has made these astonishing statements. We have seen that the monks of Roscrea were not above forgery in order to associate one of their manuscripts with their distinguished founder: we have seen that the sisterhood of St Brigid at Kildare had evolved a pretty, but quite impossible, story of the origin and date of their chiefest manuscript treasure; it is much easier to believe that the brethren of Lindisfarne had, in like manner, concocted or evolved a baseless legend associating this notable manuscript with one of their own distinguished men, than that the manuscript was written in successful imitation of the Irish style a hundred years before the style had reached its fullest perfection—especially after the synod of Whitby had widened the breach between the Saxon and the Celtic ecclesiastics.

I set forth these arguments at greater length in a paper on the subject.[1] The cudgels for the authenticity of Aldred's note and the English origin of the manuscript were taken up by Professor G. Baldwin Brown, who has devoted seventy pages of the fifth volume of his monumental work on the *Arts of Early England* to a study of the manuscript. The editor of the sumptuous facsimile of selected pages of the book, published by the British Museum,[2] says that Professor Brown has "effectively countered" my arguments, and that to his "defence of the colophon it is impossible to make any additions". But Brøndsted comments thus on the same discussion: "A recent investigator [*i.e.* Professor Brown] has lately set out exceedingly well the difference in style between the two famous manuscripts (Lindisfarne and Kells), but I see nothing in that difference which entitles us to call the Book of Lindisfarne Northumbrian. So far as I can see, this merely causes a confusion in terminology. The whole animal and line ornamentation in the Book of Lindisfarne is as truly and characteristically Irish as anything can be. . . . If we must compare

[1] "Essays and Studies presented to William Ridgeway" (Cambridge 1913) p. 219.

[2] The *Lindisfarne Gospels* (thirty-nine plates), with introduction by E. G. Millar, F.S.A. (London 1923). Further illustrations will be found in Stanford Robinson, *op. cit.* The text of the manuscript is published with that of the Rushworth Gospels, in the four volumes of the Surtees Society publications already mentioned. See also Zimmermann, *op. cit.* plates 223-44.

the two manuscripts with Northumbrian ornamentation, the unrestful, graceful *Book of Kells*, by reason of its whole spirit . . . stands appreciably nearer to contemporary Northumbrian art than the austere, restful, serene Book of Lindisfarne. The latter has nothing in common with the art of the North of England but its provenance." Brøndsted accepts the authenticity of the colophon, but evades its literal meaning by supposing that it implies, not that Eadfrið wrote the book, but that he caused it to be written. To me it still seems the simpler course to throw the colophon overboard altogether. In fact, I would go further, and question, if not reject, the authenticity of *any* colophon which gives information as to the scribe of any manuscript, unless it is clear that the scribe himself wrote it. With what motive does another person volunteer such information ?

I am not forgetting that there are certain liturgical peculiarities in the book which appear to connect it with Lindisfarne. But in any case the apparent is not necessarily the actual ; and in this case it proves no more than that the MS. might have been copied from an original that somehow came from Lindisfarne. Experience shows that supreme artistry in illumination is not always coupled with literary discrimination : the scribe of the *Book of Lindisfarne* may have copied the lectionary in his exemplar just as mechanically and unintelligently as the Durrow scribe copied the colophon in *his* exemplar. I must do Aldred the justice of noting that I have found him "not guilty" of the dishonesty of the Roscrea monks. He has not erased an earlier colophon to make room for his own.

Little can be said about the *Gospels of Mael-Brigte mac Durnáin* because that likewise enigmatical book badly needs to be re-examined by some one with the resources of modern criticism at his disposal. It is a small volume, but its principal illuminations are certainly of the ordinary Irish type. There are, however, some highly gilded miniatures—one, representing Judas betraying Christ, is reproduced by Westwood,[1] which are as certainly not Irish, and must necessarily have been inserted after the book fell into English hands. There is also a mysterious Latin note, written in a Saxon form of Roman capitals, which tells us that *Mæielbriðus mac-Durnani istū textū* (*per triquadrū dō digne dogmatizat*), *ast Æthelstanus Anglosæxana rex et rector Doruvernensi Metropoli dat per ævū*. The words which we have here enclosed in parentheses are frankly unintelligible, and what Mael-Brigte is supposed to have done to the book—collated it, possibly, and verified its

[1] In his account of the MS. in *Palæographia Sacra Pictoria*.

accuracy—is a mere matter for conjecture. Mael-Brigte mac Durnáin (aliter Tornáin) was archbishop of Armagh; he died in A.D. 927.[1] Athelstan died in 940; so that assuming the authenticity of the above statement that the latter gave the book to Canterbury, and that Mael-Brigte had something to do with it shortly before, it may be tentatively dated to about A.D. 900.[2]

We must pass over with a bare mention a few other MSS. which in a monograph devoted to this subject alone would call for full description.[3] Such are, the St John's Psalter;[4] the *Liber Hymnorum*;[5] St Caimin's Psalter;[6] the Psalter of Ricemarch;[7] the Book of Deer;[8] the Garland of Howth;[9] the Gospels of St Gall;[10] and a splendid isolated leaf of decoration now at Turin.[11]

Metal-work

The remains of metal-work displaying Celtic art are both ecclesiastical and secular in intention. The ecclesiastical works comprise bells, shrines of various kinds, a chalice, a processional cross, and a few odds and ends; the secular works are for the greater part brooches and pins. The best products of the metal-worker shew that this artificer had attained to as great a mastery of his medium as the manuscript illuminator. The metal in which he chiefly worked was bronze; gold was rarely used—at least, few objects entirely in gold survive, the most important being a brooch found near Coleraine in 1855, and called "the Dalriada Brooch".[12] This object is probably of the twelfth century. Silver is also used, but is likewise rare, in comparison with bronze.

Most of the ornamental objects were cast, the *cire perdue* process being the method employed. The ornament was either formed in the mould and cast upon them, or else was engraved subsequently to the formation of the body of the

[1] See O'Hanlon, *Lives of the Irish Saints*, 22 Feb., and numerous references there.

[2] See further Bruun, *An Enquiry into the Art of the Illuminated Manuscripts of the Middle Ages*, p. 66: Zimmermann, *op. cit.* plate 205.

[3] For a study of Celtic illuminated MSS. with some facsimiles see J. A. Bruun, *An Enquiry into the Art of the Illuminated Manuscripts of the Middle Ages* (Stockholm 1897), in addition to the literature already mentioned.

[4] See M. R. James, *Catalogue of Manuscripts, St. John's College, Cambridge*, p. 76, and references there. Zimmermann, *op. cit.* plates 212, 213.

[5] Edited by Atkinson and Bernard in the Henry Bradshaw Society.

[6] Described by Mr. M. Esposito, PRIA xxxii p. 78.

[7] Published in facsimile by the Henry Bradshaw Society.

[8] Some facsimiles in Stuart's edition (Spalding Club, Edinburgh 1869).

[9] A fragment of an Evangelarium, of which facsimiles are given in *Vetusta Monumenta* of the Society of Antiquaries, part v.

[10] Zimmermann, *op. cit.* plates 185-191.

[11] *Ibid.* plate 198.

[12] Illustrated in UJA I iv p. 1 with letterpress of little value: PRIA v p. 302.

object. Lines were engraved on the surface of the metal, either with a fine chisel or with a punch and hammer. The lines were either left open, or were inlaid with niello. Sometimes shaped hollow punches were used, forming raised knobs of specific form. In the Ardach chalice settings of amber are used, instead of niello, to divide the rings of ornament on the under side of the base.

Repoussé ornament is uncommon, if it is used at all, in the Celtic period; it appears in some of the inferior work of the Plantagenet times, such as the two manuscript shrines which have been mentioned above.

The brazing of iron, and the tinning of bronze surfaces were arts which were successfully practised.

Applied ornament is superadded to the cast and engraved decoration. Jewel settings are not used, if we except amber and rock-crystals; but enamel is common, and there is no little variety in its technical treatment. The simplest form consists of knobs or buttons of one colour. This is varied by pressing into a button of the enamel, while it is still soft, a pattern cut out of a disc of silver, so that the silver device stands out against the enamel background: or else by forming the pattern by means of gold granulations. Champlevé enamel, in which the design is engraved on the surface of the metal, and the hollows are filled with enamel of one or more colours is also employed. There is an ingenious variety, found on the Ardach chalice, in which the hollows are cut out of the surface of the enamel itself, and filled with enamel of a different colour, so that coloured patterns are produced without metal partitions between the different tints. This testifies to a long series of experiments to ascertain the melting-point of enamels of different compositions, for clearly this treatment of the material would be impossible if varieties of the same degree of fusibility were brought into contact in this way.

Glass of different colours is likewise used as a material for applied ornament; and advantage is taken of its transparency to enhance the effect of an engraved surface of metal. A disc of coloured glass being secured over the engraved pattern, the latter is seen with the additional charm of the colour. Glass-rod mosaic is sometimes employed. In this form of ornament, a number of glass rods of different colours are placed together to form a pattern. They are then heated and fused together; and the composite rod thus formed is drawn out fine. A cross-section is then cut, which will evidently be a minute replica of the pattern originally made with the separate rods; this is fitted into the setting provided.

Applied ornament in metal is used as well as in enamel and

glass. This may take the form of *inlay*—silver or gold on bronze, or tin on bronze; more rarely gold on silver. Less common in Celtic work is *damascening*, that is to say, inlaying metal with the *same* metal. It may also take the form of *close-plating*, which is a process sometimes used in attaching a decorated silver plate to a bronze surface. The bronze is first tinned, and the tinned surface heated; the silver plate is then pressed on to the soft tin. *Plates secured with rivets* are very common. These bear engraved or openwork patterns, and they may be gilt or otherwise contrasted in colour with the decorated surface. Wire filigree of great ingenuity and delicacy is found in some of the best work. On the "Tara Brooch" the wire is formed of a succession of minute knobs, scarcely visible to the naked eye, but producing an enhanced richness of effect by breaking up the light which falls upon the filigree panel with tiny alternating shadows.

Plaited wire-work ("Trichonopoly-work") of considerable complexity is found in some few pieces. It forms part of the decoration of the Tara Brooch.

We may now proceed to describe a few of the chief examples of ornamental metal-work which have survived to our time.

Bells.—We may suppose that in pre-Christian times some sort of cow-bells were in use, like those still to be seen in Switzerland, consisting of a strip of metal bent into a rectangular form and secured with rivets. Such bells were adapted for ecclesiastical purposes by the first missionaries. The earliest ecclesiastical bells were made of iron, and were constructed with rivets, in the manner indicated. The joints were secured by brazing as well as by riveting, and sometimes the whole surface of the bell was covered with a bronze overlay. In course of time, however, it was discovered, or learned from abroad, that bells of bronze give a sound more musical in quality, and carrying further, than the wretched tinkle of an iron bell. In consequence, all the later bells were made of bronze. These were cast, probably by the *cire perdue* process, and are all of the rectangular shape appropriate to the bent and riveted cow-bells; shewing that the latter were the prototypes from which the bronze bells were copied. One bronze bell, now in the Royal Irish Academy's collection, bears an inscription, asking for a prayer on behalf of Cumascach son of Ailell.[1] This person was presumably the steward of Armagh of that name who died in A.D. 904, according to the *Annals of the Four Masters*. We thus arrive at a date for this class of objects. The iron bells are never ornamented, and,

[1] Coffey, *Guide*, p. 66: an interesting history of this bell is contributed by Rev. A. Dawson to JRHAAI xvi p. 126.

as a rule, there is very little ornamentation even on the bronze bells. Some have crosses, or a bordering of key-pattern, or other decoration; but it is always restrained. A good example of a decorated bell is the well-known Bell of Loch Lene.[1] The *Cumascach* bell is the only inscribed specimen. There is sometimes slight zoomorphic decorative treatment of the handle, which is a loop on the top of the bell. The clapper, which is very rarely preserved, was suspended from a loop secured to the top of the inside; but sometimes there were merely two holes drilled through the top for the suspension of a metal ball by means of cords.

Few objects of church furniture are so frequently alluded to in the lives of the saints and in other ecclesiastical literature as bells. When the Norsemen discovered and colonized Iceland, in the year 870, according to their own account they found before them a colony "of Christian men, such as the Norsemen call *Papa*, who departed thence abroad, because they would not be (in Iceland) with heathen men; and they left behind the Irish books and bells and croziers, from which it could be seen that they were Irish men."[2]

The bell of a distinguished saint was preserved and enshrined as a precious relic in the monastery which he founded. The pedigree of some of these bells is on record, and is fairly trustworthy; for example, there is no reason to be unduly sceptical about the tradition connecting the venerable bell that bears the name of St Patrick with the great apostle.[3]

The bells of the Celtic period were all hand-bells. Some of them are of a larger size than a modern hand-bell, but there is no reason to suppose that they were used in any other way. Even when the round campaniles were erected, no bells were suspended within them; hand-bells were rung out of the small windows in the topmost storey.

Shrines are of different kinds, according to the nature of the object to be enshrined. The relic might either be a part of the person of a distinguished saint, or some object which he had hallowed with his touch or his use—a bell, a book, or a staff, one of the three characteristic objects left behind by the fugitive monks from Iceland, according to the passage just quoted. The shrine may be either a box with no reference to

[1] W. B. Smythe, "On the Bell from Lough Lene in the [Royal Irish] Academy's Museum," PRIA xvi p. 164: Coffey, *Guide*, p. 67.

[2] *Islendingabók*, chap. i. Compare the prologue to *Landnámabók*, which relates the same facts.

[3] This bell is very fully described by Dr. Reeves, TRIA xxvii p. 1. For a description of a notable collection of historic bells see T. L. Cooke, "On ancient Irish bells," JKAS ii p. 47. Some remarkable legends relating to a bell from Drumrath, Co. Tyrone, are set forth in a paper by J. Nolan, JRHAAI xii p. 72. Other Irish bells are described in *Proc. Soc. Antiqu. Lond.*, Ser. II, vol. iii p. 150, vol. v p. 190.



FIGURES FROM ST. MAINCHÍN'S SHRINE

the shape of the object to be enshrined, or it may be made in the form of the relic.

Some of these shrines—such as the *Domhnach Airgid* and the *Cathach* shrines, already mentioned in connexion with their enclosed manuscripts—have had quite a complicated history, having been patched, covered, and re-covered at various dates. In such cases we usually find an instructive contrast between the good work of the Celtic period and the helplessly bad mediæval work.

Mr. H. S. Crawford added to his many services to Irish ecclesiastical art by publishing a complete list of extant Irish shrines, with full bibliographies; there are altogether 122 objects enumerated in this list.[1] Only a few of the most important need be mentioned here.

1. *Church or Tomb-shaped Shrines.*—These are boxes made in the shape of the primitive churches, described on a previous page. As a rule these have hipped gables, unlike their architectural prototypes, but otherwise they copy their outlines, even to the winged finial which is usually at least suggested, though sometimes realistically copied. Probably these shrines were intended as representations of Solomon's Temple; in the *Gospels of Kells* there is a drawing of that building in similar form; and we read in various *Annals* that a thief stole from Clonmacnois "a model of Solomon's Temple" in the year 1129.[2]

The largest shrine of the kind is that of St Mainchín, which is still preserved in its old home, the Church of Lemanachan (Offaly). It is remarkable for the numerous figures that have been riveted to its sides, of which comparatively few remain in position (Plate XIV). They are of some value as illustrations of costume.[3]

A charming specimen of small size was found by fishermen in Loch Erne in 1882; it is now in the Royal Irish Academy's collection. This example is enriched on the side with medallions containing interlacements of excellent design.[4]

2. *Cross-shaped Reliquaries.*—Except the cross of Cong,

[1] H. S. Crawford, "A descriptive list of Irish shrines and reliquaries," JRSAI liii pp. 74, 151. See also Armstrong's paper in *Antiquaries' Journal* ii p. 135: Coffey, *Guide* pp. 42 ff.

[2] *Four Masters* and *Loch Cé; Chronicon Scotorum* dates the event 1125.

[3] For a full description of the shrine see Rev. J. Graves, "The Church and Shrine of St Manchan," JRHAAI xiii p. 134. Figures, probably from this shrine, are illustrated in *Dublin Penny Journal*, 22 Sept. 1832, p. 97: another was in the possession of Mr. Day of Cork (JRHAAI x p. 224). The idea of returning it to its proper place does not seem to have occurred to him.

[4] Rev. D. Murphy, S.J., "On a shrine lately found in Lough Erne," PRIA xviii p. 290: *Idem*, "On the ornamentation of the Lough Erne shrine," JRSAI p. 349: Coffey, *Guide* p. 43.

later to be described, all the extant reliquaries of this type belong to the post-Norman period.

3. *Hand-shaped Reliquaries.*—The shrine of the arm-bone of St Laichtín of Donachmore (Cork), *circa* 1120, is the most important of these. It is of bronze, with gold and silver inlays. The hand is riveted to the arm at the wrist; the finger-nails, and certain ornamental plates on the back of the hand, are of silver. A large band with a zoomorphic interlacement, and a number of smaller strips with partly defaced inscriptions, divide the surface of the arm into panels, twelve in number, each decorated with interlacements.[1]

4. *Some miscellaneous reliquaries*, none calling for special notice; reference may be made to Mr. Crawford's list, p. 91.

5. *Book-shrines.*—These are rectangular boxes, of the shape of the book intended to be enshrined; probably the violent crushing of the relic in the *Domhnach Airgid* was exceptional. The oldest shrine of this class remaining is that of the Gospels of St Molaise of Devenish (1001-25). Most of the ornament is either interlacement or zoomorphic; on the face there is a notable series of figures of the evangelistic symbols. The artist of this shrine was one Gilla-Baethín. Fourteen such shrines, or fragments thereof, are enumerated by Mr. Crawford.

6. *Bell-shrines.*—By far the most important of these is the shrine of St Patrick's Bell. This bell was removed from the grave of St Patrick by Colum Cille, according to the very accurate and authentic *Annals of Ulster*, citing a lost authority, the "Book of Cuanu". The shrine was made under the auspices of Domhnall son of Amhalgaid (bishop, 1091-1105) by Cudulig u Inmainen and his sons, of whom nothing else is known. The decoration is very rich on the front, though now marred by the loss of some of the decorated panels—a loss not compensated for by the addition of large rock-crystals, clumsily set *en cabochon.*[2] The design of the interlaced filigree work on the sides is extraordinarily bold and free, and the handle of the shrine is especially sumptuous, with, among other details of interest, two finely-drawn figures of birds. The back of the shrine was not expected to be seen, and the craftsmen were content to cover it with a stiff diaper of crosses, contrasting abruptly with the rich work of the front.[3]

There is a remarkable fragment of a bell-shrine also now

[1] Figured in Coffey, *Guide* pp. 53, 54.

[2] Some details about the use of rock-crystals in decoration may be gleaned from a paper with a title too long to quote by Dr. Frazer, PRIA xvi p. 290. For their magical use see Wilde, *Catalogue* p. 127.

[3] A sumptuous monograph on this shrine, by Dr. Reeves, with coloured lithographic illustrations, was published by Marcus Ward of Belfast in 1850. For other references see Mr. Crawford's *Catalogue of Shrines* referred to above. See also Coffey, *Guide* plates ix, x.

in the Royal Irish Academy's collection, and called from its previous resting place, "The Killua Shrine". It is the upper part of the shrine, the lower part being lost; on the front it bears a singular male figure between two ornamental roundels, with two grotesque animal figures, one on each side of the head. On the back there is a strangely-designed cross, the ends of which terminate in figures of hands; in the cantons are zoomorphic figures, and a raised margin with plait-work surrounds the whole. Unfortunately, there is no inscription to corroborate the suspicion that this very un-Irish looking shrine is not Irish work at all, but perhaps Anglian.[1]

The bell-shrine of Scattery is of small size. It was made to contain a bell that, according to legend, dropped from Heaven as a gift to St Senan, the founder of the monastery on that island. The bell has long disappeared; but the shrine was preserved as a holy thing, on which especially solemn oaths were taken. It is ornamented with interlacing patterns, but plates with mediæval ornament have been superadded. By the generosity of Mr. G. W. Panter of Dublin the shrine was purchased on behalf of the Royal Irish Academy, when there was reason to fear that it would be sold out of the country, and it is now housed in the National Collection.[2]

7. *Crozier and Staff Shrines.*—The preservation of the staff of the founder of the monastery was as much a religious duty as the preservation of his bell. Indeed, the most sacred relic in all Ireland was the *Bachall Isu*, the walking-staff of Jesus, which was said to have passed into the possession of St Patrick, and was long preserved at Armagh, but afterwards at Dublin. It was used in taking the most solemn oaths, and is not infrequently referred to in the *Annals* in this connexion. But unfortunately this relic, which, whatever may have been the authenticity of its ecclesiastical pedigree was a monument of history of the first importance, was burnt in the year 1537 by George Brown, who had shortly before been sent over from London as Archbishop of Dublin.

The normal form of crozier-shrine is a bronze tube, pointed at the base, with a knop in the middle, where the tube can be taken apart in order to insert or to withdraw the relic; and terminating upward in a crook.[3] This crook is never a complete circular or spiral curve, as in a mediæval pastoral staff;

[1] See the description with illustrations by Mr. Armstrong, *The Antiquaries' Journal* i p. 48.

[2] See T. J. Westropp, "The clogan oir, or bell-shrine of Scattery," JRSAI xxx p. 237: E. C. R. Armstrong, "The Bell-shrine of St Senan, known as the clogán óir," JRSAI xlix p. 132. See for other illustrations of bell shrines, H. S. Crawford, "Notes on the Irish Bell-shrines in the British Museum and the Wallace Collection," JRSAI lii p. 1.

[3] See Coffey, *Guide* p. 58 ff.

it is a segment of a circle a little larger than a semicircle, and terminating in a small hollow box, the lid of which, when the crozier is held in the hand, is vertical and faces away from the staff. This box doubtless also contained a relic. The base, knop, and crook-head are richly ornamented with geometrical and zoomorphic devices in great variety. The finest specimen extant is the Lismore crozier, which was found in the year 1814, walled up in Lismore Castle. It was made by a certain Nechtan for Niall, Bishop of Lismore (ob. 1113). Nearly as fine is the Clonmacnois crozier,[1] now in the Royal Irish Academy's collection, which is of about the same date. This must be carefully distinguished from the fragment of another crozier, purchased in London from persons unnamed, but alleged to have been of Irish origin, and to have brought the object with them from some place in Ireland unidentified.[2] The arguments brought forward in the paper cited below for associating the crozier with Clonmacnois are altogether nebulous, nor can we follow the author in saying that its decoration is an example of "true *Opus Hibernicum*," if by this vague technical term is intended the usual decoration of interlacements, etc., on early Irish work. Although there are interlacements on this object they look very un-Irish in character, and are quite anomalous; we might be tempted to call some of the decoration a singular anticipation of Renaissance strap-work.

Mr. J. R. Garstin has described a fragment of a crozier-head of unknown antecedents, purchased in the north of Ireland.[3] Its surface is divided by crosses into panels with simple interlacing patterns. On the whole, though of inferior workmanship, this seems from the style of its decoration to be an unusually early example of this type of object.

Of *Chalices* there is but one preserved, which ranks among the finest works of ancient Irish art. It was found along with a plain cup and three ornamental brooches, all of bronze, by a peasant digging potatoes in an earthen entrenchment at Reerasta, near Ardach (Limerick).[4] It is a cup of graceful shape, with two loop handles, and standing on a stem with spreading circular foot. The material is an alloy of silver and copper, and there is a great variety of applied ornament in gold, brass, enamel, mica, glass, gold filigree, amber, and crystal: in addition, there are lead plates in the foot to obtain

[1] Figured JRSAI xxxviii p. 288.

[2] W. Frazer, "On an Irish crozier with early metal work, probably the missing crozier of St Ciaran of Clonmacnois," PRIA xvii p. 206.

[3] J. R. Garstin, "On the identification of a bronze shoe-shaped object as part of the head of an ancient Irish crozier," PRIA xv p. 261.

[4] Earl of Dunraven, "On an ancient chalice and brooches lately found at Ardagh in the county of Limerick," TRIA xxiv p. 433: Coffey, *Guide* p. 37 ff.

stability. The number of separate pieces of which the cup is composed, including the rivets by which they are held together, has been estimated as 354. The following is a summary list of the decorations of the cup :—

(*a*) A band between two raised rings of silver, surrounding the cup at the level of, and through the loops of the handle ; divided into twelve rectangular compartments separated by hemispherical buttons of cloisonné enamel of various patterns and colours. In each compartment a plate of filigree interlacements or zoomorphic work, behind which is a disc of mica, the reflective power of which adds brilliancy.

(*b*) An inscription, in letters of the style of those of the Gospels of Kells, faintly cut on the side of the vessel. The inscription contains nothing but the names of the twelve apostles, which at least indicates the ecclesiastical purpose of the vessel.

(*c*) Two medallions on the sides of the vessel; divided into eight panels by a saltire cross, containing filigree spirals. There are also four settings of enamel on the margin and one in the centre.

(*d*) Rich chasing on the surface of the handles.

(*e*) Underneath the handles ; a triangular shield with three bottons of cloisonné enamel and interlacements. One of these buttons has granulated gold work, impressed upon the enamel while it was still soft.

(*f*) Chased and gilt interlacing and spiral work, round the stem.

(*g*) Eight panels round the margin of the foot on the upper surface, separated by enamel ; containing panels of pierced work in silver set off by a mica backing.

(*h*) Eight panels round the margin of the lower surface of the foot, separated by blue discs of glass, through which a silver chasing at the back is visible. The panels in this case are worked on the surface of the metal, not applied to it, and consist of interlacing, fret, and similar designs.

(*i*) In the centre of the lower surface of the foot ; a crystal, surrounded by a medallion divided into rings by settings of amber, ornamented with a great variety of geometrical patterns chased and gilt.

The date of this cup must be about the same as that of the great manuscripts whose art it so much resembles—that is to say, toward the middle or end of the ninth century. Much later is our one *Processional Cross*, though this also is a masterpiece. It is the Cross of Cong, also in the Royal Irish Academy's collection. The head of the cross alone remains ; presumably the staff was likewise decorated. The head is 2 feet 6 inches in height, of oak, covered with copper plates. In the centre is a large rock-crystal, behind which was deposited a relic—a splinter of the True Cross. Round this crystal there are eight panels filled with scrolls of gold filigree work, rather inferior to, and possibly of a later date than, the rest of the work.[1] The remainder of the face of the cross is divided into panels, 38 in number, by strips of silver ; these panels are filled with filigree panels in copper gilt. This filigree is entirely zoomorphic ;

[1] See E. P. Wright, " Notes on the Cross of Cong," JRSAI xxxi p. 40.

the pure Celtic interlacements do not occur upon the cross at all. Bosses of silver, and of red and green enamel, complete the decoration of the face. The back of the cross bears four panels, one on each arm, with zoomorphic interlacements. These panels were partly secured by a saltire-shaped inlay in the centre. This was presumably of gold, as it has been picked out and removed; when this sacrilege was committed the four panels on the arms became detached, but three of them were recovered and replaced.[1]

The cross can be dated exactly with the aid of the inscriptions on the sides. One of these is a Latin hexameter:—

Hac cruce crux tegitur qua pas(*s*)*us Conditor orbis*,

"With this cross is covered the Cross on which the Founder of the world suffered"—shewing that the relic enshrined was a piece of the True Cross. Such a relic came to Ireland in the year 1123, as we learn from the *Annals of Inisfallen*, and was enshrined by King Toirdelbach ó Conchobair: and as another inscription asks for a prayer for this Toirdelbach, "under whose auspices this cross was made," we may feel certain that we have actually the shrine referred to. The reliquary cannot, therefore, be earlier than 1123. Another inscription asks a prayer for Domnall mac Flannacáin, Bishop of Connacht, "at whose residence the cross was made," and another for Muiredach u Dubthaig, "elder of Ireland". Bishop Domnall died in 1136, and was succeeded by this Muiredach: the cross must, therefore, be earlier than 1136. We thus have a choice of thirteen years within which the cross must have been made; very few works of ancient art can be so closely dated. The real date is probably early in the thirteen years, as a relic so precious would surely be enshrined as soon as possible.

One more inscription enhances further the interest of the cross. So many of these ancient works of art are anonymous, that it is a satisfaction to find upon one of the greatest of them a request for "a prayer for Mael-Isu mac Bratdan u Echan, by whom this cross was made". We know absolutely nothing about this man, save that he made the Cross of Cong. But surely that is enough to earn for him a high and permanent place in the National Valhalla.[2]

Although this is the only specimen of a processional cross that has survived, what may be part of the stem of another exists, and is in the possession of the Royal Society of Antiquaries of Ireland. Its origin is unknown, but at the beginning

[1] PRIA ii p. 113.

[2] See Coffey, *Guide* plates xiii, xiv: M. Stokes, "Notes on the Cross of Cong" (Dublin 1895).

of the nineteenth century it belonged to a family in Kilkenny called Blake, and there was used as a plaything by the children. At that time the staff was some 2 feet long, of yew wood covered with silver plates, on which were three knops of bronze with interlaced work. Above the third knop rose the head, a boat-shaped expansion with two grotesque animals' heads re-curved at each end. The top part of the "boat" is open, and is crossed by two bars which form a socket between them; into this, we may suppose, the cross itself was fitted. Each of the animals' heads has one eye of enamel and one of silver. Unfortunately the stem was cut away below the uppermost of the three knops, it is supposed by some servant of the Blakes in quest of the silver, and has long been lost.[1]

From a carving on the base of a sculptured cross at Ahenny (Tipperary), we learn that processional crosses were sometimes made in the shape of the ringed "Celtic" cross; but no specimen of the kind has survived.

A few *book-mounts* and *book-clasps* are preserved, shewing the way in which the outer covers of valuable manuscripts were decorated. The best-known of these is a bronze plaque representing the Crucifixion, found at Athlone. It is of early date, as is indicated by the prominence of the spirals in the ornamental design; but it is far from being a great work of art, the figures being especially crude.[2] Of much greater beauty is a small but very richly decorated clasp, from the Killua collection, and now in the Royal Irish Academy's collection. This is one of the most beautiful small works of the Celtic metal-artificer in existence. It is in the shape of a truncated cone, with a tongue of metal projecting horizontally from one side; the whole surface is covered with panels containing zoomorphic patterns of great intricacy and beauty.[3]

A number of small miscellaneous fragments and objects bearing similar ornament is also described by Armstrong.[4] And special notice should be made of a most remarkable hemispherical boss of bronze gilt, divided into panels filled with zoomorphic and other patterns, which was discovered, strange to say, attached to the chancel doorway of Steeple Bumpstead Church, Essex; it is now in the British Museum. The ornamentation is in four zones, divided by settings for jewels or

[1] Rev. J. Graves, in JKAS iii p. 137: Coffey, *Guide* p. 63 (the object is there and elsewhere described as a T-shaped crozier-head, which is a feasible alternative explanation).

[2] Illustrated in Coffey, *Guide* plate xvi.

[3] See E. C. R. Armstrong, "An Irish bronze casting formerly preserved at Killua Castle, Westmeath," *Antiquaries' Journal* i p. 122. For another ornamented book-clasp, from Co. Longford, see *Proc. Soc. Antiqu. Lond.* Ser. II, vol. v p. 335.

[4] "Some Irish Antiquities of unknown use," *Antiquaries' Journal* ii p. 6.

enamels ; four frogs (not " small fishes," as in the brief description of this object in the *Inventory of Historical Monuments in Essex*, vol. i p. 290) divide the field into quarters.[1]

Brooches and *pins* form the chief secular works of art in metal of the Celtic-Christian period. Only a few general particulars can be given here of the elaborate typology of these objects, as it has been worked out by Mr. R. A. Smith and the late E. C. R. Armstrong.

The brooches[2] are of the penannular form, as it is called—a pin with a loop at one end from which is hung a ring, at first open. This ring had originally a practical purpose, to keep the pin fast in the garment. The pin being passed through the cloth, the ring was pushed back, and then, being turned through a quadrant of a circle, pressed against the inner side of the pin and kept it from slipping. But in course of time it became a mere ornamental appendage : raised collars prevented it from slipping through the loop, which was essential to its practical usefulness ; the surface of the ring became broadened to receive decoration, and at last the functional gap in the ring became filled up. The name " penannular brooch " thus became a double misnomer : the ring was no longer penannular, and the brooch was no longer a brooch, but a large pin, with an ornamental but otherwise quite otiose ring hanging from it.[3]

Briefly, the types belonging to different centuries are as follows (see Fig. 19) :—

A.D. 450-500. Open rings of uniform breadth, thickening a little at the ends to prevent them from slipping off the pin altogether. Slight linear ornament.

A.D. 600. Ring still open ; the terminals become flat triangles, at first comparatively small, decorated with incised ornament, enamel, or glass-cane mosaic.

A.D. 700-800. The terminals are joined together by bars, so that the ring is now closed, although the tradition of the gap remains. The terminals are greatly enlarged and richly decorated. The pin is also lengthened, and ends above in an expansion shaped like the keystone of an arch. The loop of the ring, which now becomes flat rather than cylindrical, is also decorated, especially in a panel opposite the opening between the terminals. The decoration consists of zoomorphic or interlacing patterns, with enrichments of enamel, filigree, etc.

A.D. 800-900. The terminals are now completely fused together,

[1] There is an illustration in *Proc. Soc. Antiqu. Lond.* II xxviii p. 87, but this is not as clear as could be wished. See also *British Museum Anglo-Saxon Guide* pp. 138, 139.

[2] R. A. Smith, " Irish brooches of five centuries," *Archæologia* lxv p. 223 : see also *Proc. Soc. Antiqu. Lond.* Ser. II vol. xix p. 299 : xxi p. 63 ; xxvii p.95 : Coffey, *Guide* p. 20 ff. : *British Museum Guide to the Anglo-Saxon Antiquities* p. 134 ff.

[3] See J. R. Allen, " The Celtic Brooch and how it was worn," *Illustrated Archæologist* i p. 162.

though (as in the "Tara Brooch," the finest existing specimen) the scheme of ornament preserves a reminiscence of the opening. In some (as in the "Queen's Brooch"), various forms of lobed decoration take the place of the simple triangles of the earlier periods. Animal motives are found in the decorations. The pin-head assumes various shapes, triangular, square, oval, and pear-shaped.

A.D. 900-1000. The ring once more becomes cylindrical; the closed terminals re-open, and are decorated with engraved patterns variegated with bosses and amber settings. Animal patterns, conventionalised almost beyond recognition, form the chief decoration, which is of inferior merit in comparison with the work of the two preceding centuries. Among the latest types are the thistle-brooches, so called from the cross-hatched spherical bulbs at the terminals and the pin-heads. These very closely resemble, and quite possibly were suggested by, the heads of thistles.

The so-called Tara Brooch has nothing to do with Tara. It was found on the sea-shore at Bettystown, near the mouth of

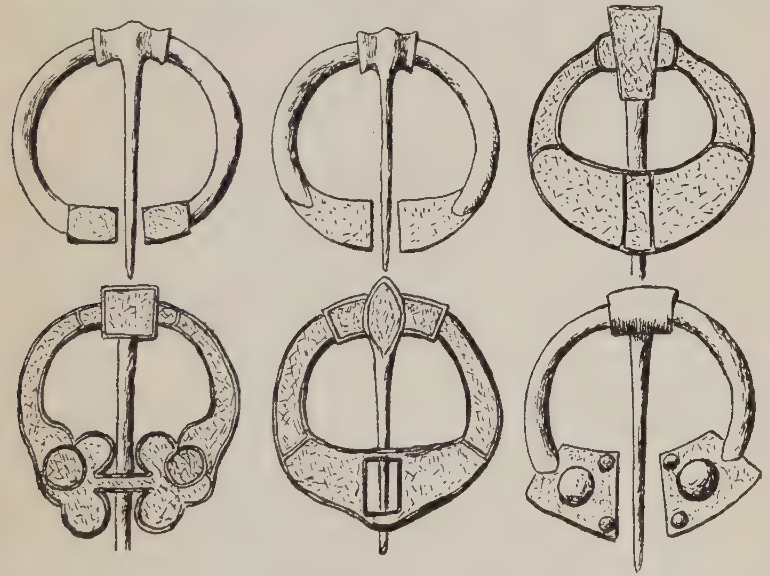


FIG. 19.—Types of penannular brooches.

the Boyne, and the foolish name was given to it by a dealer through whose hands it passed, presumably to enhance its value.[1] It is of bronze. The front of the ring is divided into panels decorated with gold wire filigree, and separated from each other by a raised framework with settings of amber,

[1] The name is sometimes applied to *all* brooches of this type: people who wear modern parodies of ancient Celtic ornaments talk of buying "Tara Brooches," although the "Tara Brooch" of commerce is not even a copy of the brooch in question. It is an imitation, *longo intervallo*, of a brooch found in Co. Cavan and called "The Queen's Brooch" because a facsimile of it was made and presented to Queen Victoria.

enamel, and glass. The head of the pin, which is of the keystone shape, is decorated in the same way. The back of the ring is richly chased with spiral and other geometrical devices, intermingled with zoomorphic forms. A broken end of a cord of Trichonopoly work is attached to the side of the ring, suggesting that what we possess is only half of the ornament, and that its proud owner had owned a *double* brooch. This feature is unique, though it is also found in a highly ornate pin found at Clonmacnois.[1]

The keystone head of the "Tara Brooch" pin suggests a date in the seventh century for this object; but it must be quite late in that century, on account of the complete closing of the ring. It is the oldest extant of the *great* works of Irish Christian art.

There is a very large variety of types of Pins, which cannot be so clearly distributed into centuries. The types seem to overlap, and the materials on which to base a scheme for dating are not very abundant. The chief work on the subject is Mr. Armstrong's elaborately-illustrated paper,[2] where full references to preceding literature will be found.

We may broadly divide Irish pins into those with rings and those without. Of the latter, the oldest seem to be pins with small knob-heads, ornamented on the top with the figure called a *triskelion* (a three-armed figure like a swastika, but with spiral ends to the arms), and with La Tène reminiscences in the decoration of the stem. These may belong to the fifth century. A little later, say in the sixth, the triskelion breaks up into three groups of concentric circles, sometimes enclosing a minute setting of amber.

Other ringless pins are of later date (eighth to tenth century). Such are pins with small conical heads, ornamented with radiating grooves; those with animal heads; or those with heads in the form of a vertical disc. Still later (eleventh century) are those with cross-hatched ("brambled") heads, resembling the technique of the thistle brooches.[3]

Of pins with rings, the oldest form seems to be those with a small double loop of wire passed through a hole in the stem. These may be as old as the fifth century. Some of them have a spade-shaped vertical projection at the top; it has been suggested that these were styli, not pins; the point being for writing upon a waxen tablet, the "spade" for erasing. Ulti-

[1] Figured in JRSAI xxi p. 318.

[2] "Irish bronze pins of the Christian period," *Archæologia* lxxii p. 71. A number of pins of various kinds are illustrated in Wilde, *Catalogue* pp. 555-65: Coffey, *Guide* p. 33 ff.

[3] On these brambled or thistle pins see further a communication by Mr. R. A. Smith, in *Proc. Soc. Antiqu. Lond.*, Ser. II vol. xxi p. 63.

mately, these rings degenerate into mere metal discs suspended to the loop in the pin-head by a small hole.

More artistic are pins resembling miniature penannular brooches; they usually follow the style of such brooches as are of the ninth-tenth centuries, and are presumably of the same date. The decoration is usually interlacement, but sometimes zoomorphic: one anomalous pin of this kind bears ornament of a La Tène type—a curious survival. For many other minor varieties, we must be content with referring the reader to Mr. Armstrong's paper.

Bronze pins with pendant rings were sometimes imitated in bone.[1] It may be worth passing mention that a pin illustrated by Wakeman [2] seems to be merely a Merovingian coin mounted as a modern scarf-pin.

A special form of pin which calls for particular notice is the *Hand Pin*, so called from a vague resemblance which the head, in its final form, presents to a closed hand.[3] The evolution of this type has been worked out by Mr. Reginald Smith [4] (Fig. 20). Its pedigree goes back to a pin with a head like a swan neck, belonging to the Hallstatt, and continued into the La Tène period, *circa* fifth century, B.C.[5] This passes through various transformations: the swan-neck becomes a loop; the loop becomes turned round so that it is in a plane at right angles to the plane of the swan-neck bend (thus resembling a modern scarf-pin in shape); the loop becomes a disc, with a hole drilled through the middle; an ornamentation of transverse lines in the early form becomes a row of pellets; those pellets develop into little cylindrical sockets to hold settings of enamel —the "fingers" of the "hand"—in about the sixth century, A.D., which is the date assigned to the full development of the type; then the hole, which though small, has always remained as a reminiscence of the original pin, disappears in about the eighth century; and in the tenth the pin finally degenerated into a pin with a vertical circular disc, covered with ornament, at the head. In the papers cited, the evolution is copiously illustrated by representative examples of each stage.

Finally, we must say a word about the *Latchet Pin*. This very interesting form of dress-fastening consists of a flat

[1] Some examples will be found illustrated in Wilde, *Catalogue* p. 333: JRSAI xxxii p. 155.

[2] JRHAAI xiii p. 159.

[3] See an illustration in JRHAAI xvi p. 67: Wilde, *Catalogue* p. 559 fig. 455.

[4] "Evolution of Late Keltic pins of the Hand type," *Proc. Soc. Antiqu. Lond.* xx p. 344: "The evolution of the Hand Pin in Great Britain and Ireland," in *Opuscula archæologica Oscari Montelio septuagenario dicata* (Stockholm 1913) p. 281: *British Museum Guide to Anglo-Saxon Antiquities* p. 130 ff.

[5] A fine La Tène specimen from Sligo is figured in JGAHS xi p. 76 (reproduced in JRSAI lii p. 178).

circular disc, decorated with engraved and enamelled ornament, from which a strongly-curved S-shaped tail projects. This form of ornament, which is confined to Ireland, has been made the subject of a monograph by Mr. Reginald Smith,[1] who derives it from the Hallstatt swan's-neck pin, which is also the prototype of the "Hand" pin. The peculiarity of the latchet lies in this, that it ceased to be a pin in the strict sense of the term, as the stem became broadened and blunted so that it would not penetrate into the stuff of a garment. Instead, it was laid against the dress to be secured, and two corkscrew-like spirals of bronze wire were twisted round until they clasped

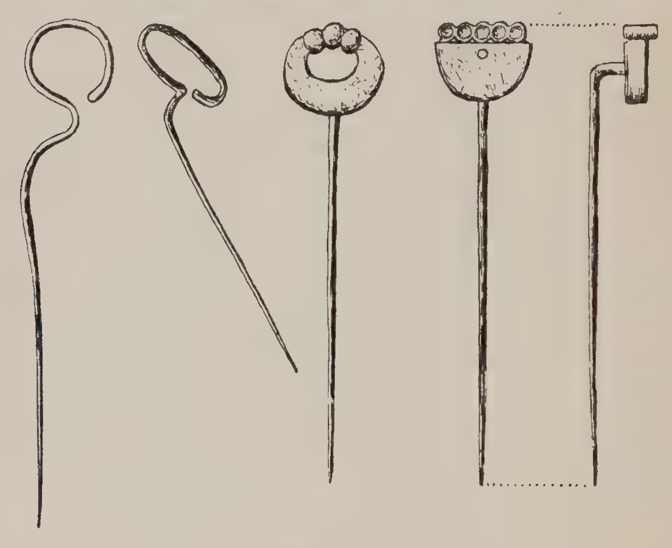


FIG. 20.—Evolution of the hand pin.

the stem and the cloth together. The expansion of both ends of the latchet—a disc at the upper end and a knob (sometimes absent) at the lower, as well as the abrupt S-like curvature of the stem, prevented the pin from slipping out of the wire loops. In one remarkable example from the Whigsborough ("Dowris") hoard (figured by Mr. Smith in his article just quoted) the S-shaped tail has, as it were, become compressed into a plate with two oblong apertures for receiving the spiral wires. This specimen is decorated on the broad disc with a spiral pattern strongly reminiscent of La Tène art.

Buckles, so characteristic of Teutonic deposits, are very

[1] "On Irish serpentine latchets," *Proc. Soc. Antiqu. Lond.*, Ser. II vol. xxx p. 120: *British Museum Guide to Anglo-Saxon Antiquities* pp. 132, 133. See UJA II x p. 12, and for a fine illustration, *Reliquary and Illustrated Archæologist* vii p. 56.

rare in Ireland. A small silver buckle is reported from Killeigh (Offaly),[1] in which the loop is circular, not square or rectangular, and it is decorated over one-half of its surface with screw-like ridges, intercepting between them rows of punched granulations. The head of the pin is also decorated with granulations; the artistic effect resembles that of the "thistle" brooch, and the object is probably to be assigned to the same time.

Leather-work

We may here insert a few notes on the subject of ornamental leather-work. The surviving specimens of this are naturally few in number, and there is much uncertainty as to the date to which they are to be assigned. Most elaborate is a wallet in which the *Book of Armagh* is preserved.[2] This is made of a strip of leather folded into shape and stitched, the flap being secured with a lock and a movable bolt. The whole surface is covered with interlacements and animal figures; none of the decorations shew distinct reminiscences of La Tène conventions. The work has not the spontaneousness of a living art, but looks like a conscious piece of archaizing. Much the same may be said of two leather bottles, one in the Dublin, the other in the Belfast Museum, with interlacements stamped upon them; and the satchel of the shrine of St M'Aedh-óg's Gospels, in the Royal Irish Academy's collection.[3] The latter is a wallet provided with a strap for carrying it. Interlacements are impressed upon the sides, but though bold and elegant in general effect, they prove upon analysis to be rather trivial combinations of circles and other curves, such as would scarcely satisfy an artist of the best period of the style. The process used in ornamenting these leather objects is that known as *cuir bouilli*, the decorations being impressed on the surface when the leather was softened by boiling.[4]

Sculpture

Ornamental sculpturing in stone is merely a part, and probably only a small part, of the subject of ornamental carving in ancient Ireland. There can be no doubt that wood-carving was an important branch of art in the country, as it was in Scandinavia. But in the damp climate of Ireland wood

[1] See illustration and description in JRHAAI xii p. 82. Another is figured in JRSAI xxxii p. 227.
[2] Illustrated in *The Book of Trinity College*, 1591-1891, reproduced *Illustrated Archæologist* i p. 136.
[3] Coffey, *Guide* p. 52. For other leather objects see UJA I ix p. 294, II v p. 63.
[4] See J. J. Buckley, "Ancient Irish Leatherwork," JRSAI xlv p. 300.

decays, and next to nothing is left for our study. An object of yew-wood, found in a lake-bottom at Ballinacarriga near Moate (Westmeath), explained as being part of the pommel of a saddle, was in the Day collection. The central part is divided into panels decorated with interlacements, one of which seems to be a serpent's head. There are simple key and interlacements on the top.[1] All the rest of the wooden relics which remain are late; such are a number of vessels with simple interlacements cut upon them, and an interesting figure, representing an ecclesiastic in Mass-vestments, in the oratory of Inismurray.[2]

There are also a few, but not many, examples of carving in bone. A most curious object representing a cock (?) with the legs drawn up under the body and interlaced with the wings, and mounted as the head of a bronze pin, was found in Inisfallen Abbey, and is now in the National collection. The eyes are now represented by a hole through the head; they were probably filled with rock-crystal or enamel. The tail of the bird is cased in bronze. It would be difficult to date this object, or to assign a use to it with certainty.[3]

Thanks to the durability of the material, a larger body of specimens of sculpture in stone is available for study than we have of perishable vellum or meltable silver or gold; and owing to the greater surface available, subjects can be represented in greater detail than is practicable on a small vellum page or on a tiny plaque of metal. But the heaviness and immovability of ancient stone-work renders its study difficult. The monuments are often in remote parts of the country; to visit every sculptured cross in Ireland is a task demanding a heavy expenditure of time and money; and as often as not, the visitor is disappointed by conditions of weather and lighting. Were this an ideal world, we could afford to cherish a sentimental prejudice in favour of keeping ancient sculptures and other monuments on the sites where they were originally set up: but their conservation in a museum not only facilitates their study and comparison, but it gives them a very necessary protection against disfiguring lichen-growths, weather-wear,

[1] This object is very inadequately described and illustrated in JRHAAI xv p. 345.

[2] This figure, I understand, was thrown down some time ago and injured by one of the tourists with whom interested persons wish to see the country infested. Were the money which such people leave behind them multiplied a thousand-fold, it would be but poor compensation for their depredations on the national monuments and on the national character; for turning even a people who had adopted "self-reliance" as its watchword, into a community of fawning mendicants. That is the inevitable, invariable consequence of a tourist traffic, and it is hateful in the eyes of every lover of Ireland.

[3] It is illustrated in *Proc. Soc. Antiqu. Lond.*, Ser. II vol. xv p. 5.

cattle-rubbing, name-carvers, road-makers, souvenir-hunters, tourists, and all such pests.

The stone sculpture of Ireland can be classified primarily into three groups :—

i. Monumental slabs.
ii. Free-standing crosses.
iii. Adjuncts to the ornamentation of buildings.

Slabs.—The earliest *datable* slabs belong to about the middle of the eighth century. Usually these bear an ornamental cross, with or without an inscription which most commonly is in the formula OROIT DO . . . " A prayer for " So-and-so.[1] When the person commemorated can be identified with some notable whose death is recorded in the *Annals*, the stone can be dated, and by comparison all stones bearing a cross of similar type can be assigned to an approximate chronological period. But unfortunately such identifications are rare. Usually no information is vouchsafed as to the rank or parentage of the dead man : though sometimes we get a hint as to his profession —*sacart* (priest), *epscop* (bishop) *canoin* (canon), in the ecclesiastical world ; *ri* (king), *saer* (wright), in the secular. When he bore a name in frequent use, such as Colman, all attempts to identify him are quite useless. A few slabs have, in addition to the memorial inscriptions, the Greek letters AΩ and $\overline{\text{IHC}}$ $\overline{\text{XPC}}$, which sometimes take very strange forms.[2]

Mr. H. S. Crawford contributed to the Journal of the Royal Society of Antiquaries of Ireland a list of all the slabs of which he had been able to find records.[3] The greatest number of these is in Offaly, where there are 300—of which 272 are, or were, at Clonmacnois. Next comes Clare, with 116, of which 110 are on the island of Inis Cealtra. Kerry follows with 81. The total number catalogued in Mr. Crawford's list is 892 ; but there are certainly more than this in the country. No complete survey has yet been carried out ; and the slabs enumerated are professedly those alone which bear the symbol of the cross upon them. This naturally includes most Christian monuments, but there are a few exceptional cases not so decorated.

There is an extraordinary variety of shape in the crosses.

[1] Illustrations of most of the inscribed slabs—not always rigidly accurate—will be found in G. Petrie, *Christian Inscriptions in the Irish Language* (Dublin 1882-88), two volumes.

[2] See JRHAAI xvi p. 43 : JRSAI xxxiii p. 377, xlii p. 60 : PRIA xxxiii p. 90.

[3] Published serially, beginning in vol. xlii p. 217. In almost every subsequent volume of this Journal down to his lamented death (which took place very shortly before the present work was sent to press) Mr. Crawford continued to supplement this and the companion list of Standing Crosses with special monographs on individual examples, many of them otherwise unpublished.

They may be straight crosses or saltires of two plain lines. Then the lines may be decorated with expansions, usually triangular, but sometimes circular, at the ends; or else they may end with a Y-shaped (*fourchée*) or T-shaped (*potent*) terminal. Sometimes the transom may be doubled, or tripled, or even quadrupled (as on a slab at Machera (Down)).[1] The lower member of the cross may be mounted on a semicircular line turning upward or downward; and circles may be combined in various ways too numerous to catalogue here.[2] The single lines forming the cross may be doubled, tripled, or

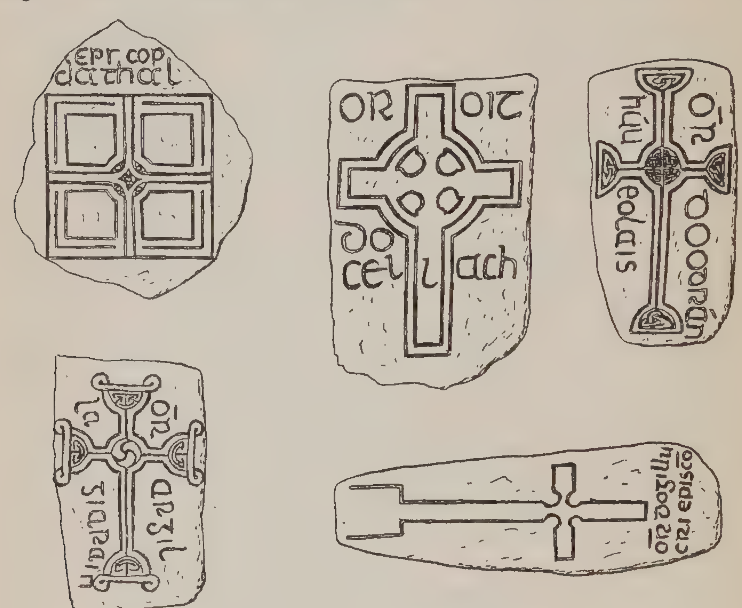


FIG. 21.—Types of sepulchral slabs.

multiplied up to seven or eight times, and this gives opportunity for a further variety of treatment at the intersection.

Some chronological hints may be gathered from the long series of slabs at Clonmacnois (Fig. 21). Many of these are the memorials of abbots whose dates are known.[3] The oldest that can be dated with any certainty is the slab of Abbot Rechtnía, who died in A.D. 779, or perhaps that of the anchorite Ailgal, A.D. 751; but it is to be carefully noted that these are the oldest

[1] Figured in JRHAAI xvi p. 21.

[2] There is a useful collection in W. F. Wakeman, "On the earlier forms of inscribed Christian crosses found in Ireland," JRSAI xxi p. 350.

[3] Drawings of those that are still extant will be found in R. A. S. Macalister, *Clonmacnois Memorial Slabs* (Dublin 1909). For others that are now lost, see Petrie, *Christian Inscriptions in the Irish Language*, vol. i.

datable slabs. Clonmacnois was founded about two hundred years before the latter-mentioned date, and doubtless the practice of commemorating its distinguished men began soon after its foundation. The slabs with inscriptions are in the minority, and are most likely *not* to be the earliest.

Tabulating the different types of datable slabs, we infer the following chronological sequence :—

Circa A.D. 550-800 : small irregular slabs, bearing equal-armed crosses contained in squares.

Ninth century : the "Celtic" cross, with a circle surrounding the intersection.

Tenth century : a small circular expansion at the centre of the cross, and corresponding semicircular expansions at the ends of the arms.

Eleventh century : same as the last, but with loop-shaped ears at the corners of the terminal expansions.

This evolution was probably developed in the art-school which doubtless formed part of the organization of Clonmacnois. We can trace its influence far and wide over Ireland, in the designs of slabs such as these. There is, however, a later form, of which only two examples are to be found at Clonmacnois, though it is well represented on Inis Cealtra. Here there is what is probably unique in Northern Europe—a cemetery of the twelfth century with the slabs still in position over the graves to which they belong. These slabs are long and narrow rectangles ; they are not of the irregular shape of the earlier memorials, and they bear a simple Latin cross with but little extraneous ornament.

In sculptured slabs of the pre-Norman period, only by a rare exception is there any other device but the cross. At Fuerty (Roscommon) there is a slab with a fish carved upon it,[1] at Caherlehillan (Kerry) one with a bird.[2] At Clonmacnois there are two slabs with a design of worms, with grotesque heads forming a ring around the centre of the cross. On a slab at Inis Cealtra there are the outlines of two feet carved beside the cross ; a conventional indication of the fact that the owner of the slab died on pilgrimage. At Carndonach and at Fahan Mura (Donegal), there are two noteworthy slabs bearing human figures—a very unusual feature.[3] At Drumgay (Fermanach) is a cross-slab, with a number of heads surrounding the cross ;[4] and at Machera (Down) a very rude human figure, with a circle above its head (meaning unknown), is outlined, beneath a plain cross with expanding ends.[5] There is a

[1] JRSAI xxxvii p. 417.
[2] *Ibid.* xxxvi p. 278.
[3] Figured in JRSAI xlv pp. 183, 184.
[4] Figured in JRHAAI xi p. 234.
[5] *Ibid.* xvi p. 21.

similar rude carving (a slab with a human figure on one side, a cross on the other) at Inishannon (Cork).[1]

The swastika is occasionally found in the decoration of sculptured slabs. This ancient emblem never appears in pre-Christian sculpture in Ireland, and when found in Christian devices, it does not appear to have any special significance. Examples are to be found in Glencar (Kerry), and in the head of a cross at Cliffony (Sligo),[2] where, it is to be noticed, the centre of the cross consists of a group of three concentric circles, very " bronze-age " in appearance. On a probably very late stone from Aglish (Kerry), there are two swastikas below a cross pattée in a circle. This stone, though inscribed with Ogham, is certainly a Christian monument.[3]

It is not often that a rude pillar-stone, such as is generally used for Ogham writing, is found to bear a legend in the later " Irish " script. There is a remarkable example at Kilnasaggart (Armagh), where a rough pillar-stone bears on one side ten crosses incised, each within a circle in relief. They are certainly disposed in a significant way, though the meaning is not recoverable. On the other side there is an inscription in Irish to the effect that " Ternóc, son of Little Ciarán, bequeathed this place into the guardianship of St Peter ". This Ternóc, according to the *Annals of the Four Masters*, died in A.D. 714.[4]

Besides sepulchral slabs, a number of sundials (Fig. 22) survive in the sites of ancient monastic settlements. These, as a rule, are upright narrow slabs, widening at the top into a flat vertical semicircular expansion, with the diameter upward. In the middle of the diameter there is a hole for the gnomon, and radial lines are marked on the face of the semicircular disc.[5] Obviously, such a dial would not be a very exact time-measurer, but it would serve to indicate approximately the time of the canonical hours, which was no doubt the purpose intended. The most primitive sundial is at *Mainistir Ciaráin*, on the greater island of Aran. Here only the hour of midday is indicated, by a vertical diameter in a complete circle; the hole for the gnomon is here above the circle.[6] Possibly the other hours were indicated by paint-marks on the circumference of the circle. At Nendrum a stone clock-face was dis-

[1] JCHAS, Second Series, vol. xiii p. 61 and plate facing p. 62.

[2] Figured in JRHAAI xv 376. See further TRIA xxvii p. 11.

[3] Possibly the Ogham, which is mutilated, is older than the accompanying sculptures.

[4] Petrie, *Christian Inscriptions*, vol. ii p. 27; UJA I i p. 221; JKAS iv p. 315, etc.

[5] See illustrations in JRHAAI xvi p. 39, xviii p. 249; PRIA xxxiii pp. 167, 168 and plate xxiv figs. 8, 9. See also A. Way, " Ancient Sundials, especially certain Irish examples of ecclesiastical use," *Archæological Journal* xxv p. 205.

[6] See an excellent photograph, JRSAI xliii p 154. See also Fig. 22 no. 1,

covered, with the twenty-four hours marked in early Gothic lettering.[1] This, which probably belonged to a water-clock, is as yet unique.[2] A bronze bowl, found at Lisnacrochera and now in the British Museum,[3] is supposed to have been part of a water-clock. There is a perforation in the bottom, and the

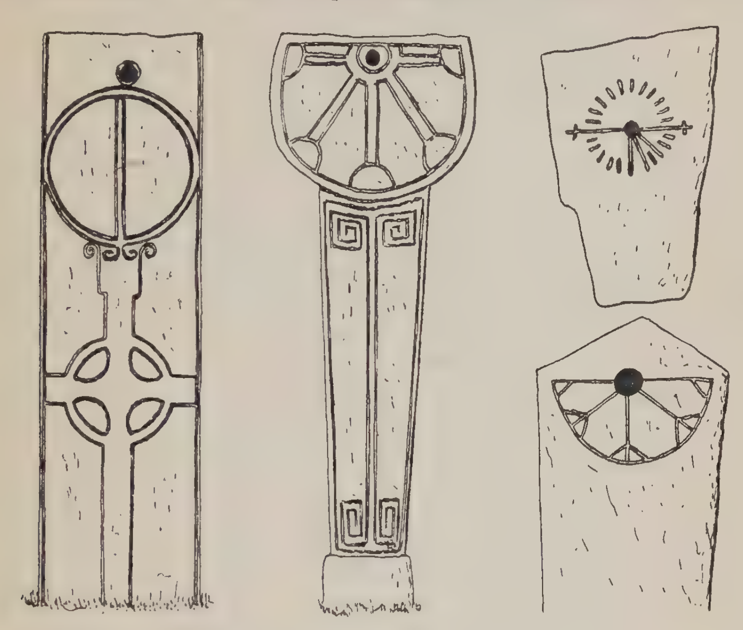


FIG. 22.—Examples of sundials.

bowl, being placed on the surface of water, is allowed to fill and sink, the time taken in the process being the unit measured.

Altar-stones form another group of sculptured slabs, few in number. They are generally of small size—just big enough to bear the sacred vessels—and are incised with crosses, usually though not always five in number, symbols of the Five Wounds. The crosses are generally set in a quincunx :—

+   +
  +
+   +

but they are sometimes disposed in other ornamental ways.[4]

[1] H. C. Lawlor, *The Monastery of Saint Mochaoi* p. 62.

[2] There is a perfect circle, but without the numbering of the hours marked, at Kells. It is illustrated by Way, *op. cit.* Another is at Inis Cealtra, here illustrated (Fig. 22 no. 3).

[3] *British Museum Iron Age Guide*, p. 163.

[4] See illustrations in JRHAAI xvi p. 118.

From every point of view the most important remains of sculpture in the country are the great standing crosses, generally called "The High Crosses". Some of these monuments were terminal marks, indicating the limits of the monastic grounds; but some of them were memorials of especially distinguished men, as, for instance, the cross of King Flann (ob. A.D. 914) at Clonmacnois. Others were dedicated to specific saints; we read more than once in the *Annals* of the "Crosses of Brigid" at Armagh: and there is at Kells a cross bearing an inscription dedicating it to Patrick and Columba. Dedicatory inscriptions to saints are also found on some of the smaller slabs. In the one cemetery at Onacht, Aran Mór, there are slabs dedicated respectively to St Brecan (the local patron), to Thomas the Apostle, and to the Seven Romans—that is, the seven sons of Felicitas, martyred in the Decian persecution. The dedication slabs are inscribed in Latin: the ancient memorial tombstones in the same cemetery in Irish.

The standing crosses, like the cross-slabs, shew a considerable range of variety in the shape of the sacred emblem. The simplest and rudest of all, found in some of the western island monasteries, is a mere pillar-stone, with four curved indentations scooped out of its edges, two on each side. In this form the transom does not project outside the main lines of the monument. In an improved form the sides of the pillar are trimmed down, to secure a certain projection for the transom. This gradually develops in its artistic treatment; and about the beginning of the tenth century the so-called "Celtic cross" makes its appearance. This has a circle surrounding the intersection. Various explanations have been offered for this pattern of cross. It has been derived from the pagan symbol of a wheel, typifying the motion of the sun.[1] Notwithstanding the great name of Montelius, this explanation cannot be considered convincing; for it is a comparatively late evolution in the form of the cross, and there is no continuity between it and the "sun-wheel". Mr. Romilly Allen sought to derive it from a circle or ornamental wreath which from about A.D. 339 begins to appear around the *Chi-Rho* monogram.[2] But so simple and obvious a method of framing the figure of the two devices might have come into existence simultaneously without necessary radical connexion. Moreover, the *Chi-Rho*

[1] O. Montelius, "Das Sonnenrad und das christliche Kreuz," *Mannus* i pp. 53, 169.

[2] J. R. Allen, *Early Christian Symbolism*, p. 92.

monogram is excessively rare in Ireland, only two examples of its use being known, both in Co. Kerry.[1]

The simplest explanation is the best; that it is an endeavour to suggest a halo of glory round the Cross and the Figure upon it.

In a few specimens of inferior merit the circle degenerates into a disc, with or without perforations cut in it. A good example is at Nouchaval (Clare), where there are four circular perforations; at Dunamaggan (Kilkenny), there is a freakish specimen with four perforations, of which the upper two are square and the lower two circular. At Bonamargy (Antrim) and one or two other places there is a cross with nothing but a single perforation in the centre of the disc; and the disc is not perforated at all in a cross at Errigal Ciaróg (Tyrone). Two quite exceptional crosses are to be seen at Cashel, and at Onacht in the Great Aran Island. At Cashel there are vertical supports under the arms of the cross, so that it looks as though it had three stems. At Onacht, instead of a circle surrounding the intersection there is a quatrefoil, with one lobe in each canton of the cross.

It is rare to find an elaborately decorated cross without the wheel. There is, however, a good example at Carndonach (Donegal).

A peculiar type sometimes found is the Tau-cross, in the shape of a capital T with no head above the transom. A large plain example of this stands at the landing-pier on Tory Island:[2] there is another, smaller, and decorated with carved heads on the upper surface, at Kilnaboy (Clare).[3]

Mr. Crawford has compiled a list of these monuments also.[4] Meath tops the list of counties with 25 (some of them, however, quite late and unimportant). The total number is 251, which, added to the former total, makes a list of 1143 sculptured stones remaining in Ireland: considerably more than double the number of stones recorded in Romilly Allen's great *corpus* of the Sculptured Stones of Scotland. But, as before stated, owing to the imperfection of our records, the list can only be approximately correct, though it is close enough to accuracy for our present purpose.

The High Crosses have a two-fold scientific importance; a close analogy can be drawn between them and the ancient

[1] At Knockane (JRSAI l p. 65; *Kerry Archæological Magazine* i p. 477) and near Killorglin (where, exceptionally, the cross of the monogram has three transoms), (JRSAI xxxvi p. 349, where the illustration is inverted). As the proofs are passing through the press I hear of a third recently found in the Aran Islands.

[2] See an admirable photograph in PBNFC, Ser. II vol. vi p. 374.

[3] JRSAI xxx p. 22; xxxix p. 85.

[4] *Ibid.* xxxvii p. 187.

romances of Ireland. We may treat the romances as folk-lore, classify them, discover analogies to them, and otherwise study them as products of the human mind. But further we can neglect the story, and take account of what may be crudely called the "stage properties". Thus, we may analyse the descriptions of the swords, chariots, ornaments, etc., and compare them with actual specimens; or we may determine, from such hints as the stories may contain, the social organization and general level of culture attained by those who worked the tales into their present literary form. Both methods of investigation yield their harvest of scientific truth. Similarly, we may analyse the sculptured panels of the crosses, first from the point of view of symbolism and of art—determining the subjects represented, comparing the method of treatment of the same subject in various places (in and out of Ireland); we can also estimate the skill of the artists, and trace the influences under which they worked: and, secondly, we can neglect the story which the sculptor intended to tell, and study the details of the costume of the figures, or the instruments which they hold, and deduce therefrom the civilization of the time when the monument was erected.

The decoration of the cross is usually divided into a series of panels, which contain geometrical or zoomorphic ornament, or else representations of Biblical scenes. A list of these is given in the preceding chapter. Most commonly the Crucifixion occupies one face of the centre of the Cross, as is natural, and the Last Judgement (or Our Lord in Glory, typifying the same scene) occupies the other face. There are a few exceptions: one of the crosses at Clonmacnois, which is almost entirely covered with an extraordinarily rich series of geometrical devices, has but one figure panel—the Crucifixion, which is on the stem of the Cross, not in the head. The same scene is also upon the stem on one of the Kells crosses.

By a singular good fortune we are permitted the sight of a sculptor at work on one of these great monuments, with the aid of a High Cross which was for some reason left unfinished, at Kells (Meath) (Plate XV).[1] This monument teaches us that the first step was to cut the stone into the shape of the cross, though a little thicker than it was intended to be in its final form. The surface of the monument in this stage may be called *the original surface*. This was carefully smoothed, after which the panels were blocked out, and their boundaries recessed to a depth of about an inch, more or less, below the original surface. The surface of these sunk lines surrounding the resultant blocks of

[1] See JRSAI xxi p. 450.



THE UNFINISHED CROSS AT KELLS, CO. MEATH

"original surface" we may call the *second surface*. The figure subjects were then roughed out: the artist's work at Kells was arrested after he had outlined the figures of a few of his upper panels. But had he been permitted to finish his task, he would ultimately have deepened his figure panels to a background recessed as far below the "second surface" as that was below the "original surface". This we may call the *third surface*. When the work was finished, there was as a rule nothing of the "original surface" left, for the parts of the figures in highest relief did not, as a rule, rise above the level of the margins of the panels, that is, of the second surface. There is a remarkable exception to this general rule at Drumcliff (Sligo); on the cross there, there are figures of animals in the middle of each face of the shaft, worked in the "original surface" and rising in high relief above the level of the rest of the sculpture. The relation between the "second" and the "third surfaces" is an important criterion of date. In the older series of High Crosses, of which the Cross of King Flann above-mentioned, and the fine cross of Muiredach at Monasterboice (A.D. 924) are outstanding examples, the section of the sculptures shews a gentle gradation from the second surface to the third; in other words, the figures are, in the most literal sense, *in the round*. In the later series, which includes the crosses at Tuam and Dysert O'Dea, the two surfaces are separated by abrupt steps; the decorative subjects are flat on the second surface, with a square drop to the background on the third surface. The relief also is less high than in the earlier series: and the decoration shews a decline in the number and variety of the figure subjects, and a tendency to supersede the geometrical ornamental devices by zoomorphic or diaper patterns.

Another unfinished example is the south cross at Castledermot (Kildare). Most of this work, which is of inferior artistic merit, has been completed; but only one-quarter of the design of the plinth-panel on the north side has been carried out. The outlines of the remainder have been cut, but the surface has otherwise not been disturbed.[1] Alternative panels on the cross at Moone are left blank, and there are also blank spaces on the cross at Drumcliff (Sligo): but this may be intentional.

In the fifth chapter we have already spoken of sculpture as applied to the decoration of buildings, and we need not return to the subject here. Clearly within our present limits no

[1] See the plate in M. Stokes, *The High Crosses of Castledermot and Durrow* (Dublin 1898).

adequate treatment of the subject of Irish Christian Art can be attempted. He who would undertake the task must be allowed the wide elbow-room claimed by Professor Baldwin Brown in his monumental study of *The Arts in Early England.* The Arts in Early Ireland demand, and deserve, a special treatment no less extensive.

CHAPTER VIII

SCANDINAVIAN AND MEDIÆVAL IRELAND

The Scandinavians

WHEN a visitor asks a countryman, anywhere in Ireland, by whom any of the numerous ruins that dot the landscape was built, and by whom it was ruined, he is almost certain to receive the answer that it was built by the Danes, and ruined by Oliver Cromwell. These are the two external influences that have made the deepest impression upon the popular memory: and these are, so to speak, the pair of parentheses between which the subject-matter of the present chapter is contained.

Not only from an unlearned peasant will such an answer be received. A long series of antiquaries, headed by Molyneux and Ledwich in the eighteenth century, have ascribed most or all of the remains of antiquity in Ireland to the Danes. Who, then, were these Danes, and how has their memory been preserved for so many centuries? Why is it that many people who know and care nothing about the history and antiquities of Ireland should thus cherish these aliens, so that "Danish Fort" and similar terms are commonplaces of popular nomenclature?

If we turn to the sources of Irish history, we find that the word "Dane" is not strictly accurate: it is, at least, insufficient. Many of the invaders whose depredations have thus deeply influenced the folk-memory were not Danes at all, but Norsemen.[1]

The archæological history of Scandinavia and that of Ireland are, in many ways, parallel and mutually illustrative. Both regions shew an absence of remains of the Palæolithic Age—I am sceptical about alleged recent discoveries of Palæolithic remains in Scandinavia; but both shew evidence of having been occupied immediately after the Palæolithic Age

[1] I pass over with the bare acknowledgement of this footnote the theory that the word "Danes" in such traditions refers, not to the Scandinavians, but to the legendary Tuatha Dé Danann. Conceivably there is such a popular confusion, but the hypothesis is unnecessary.

came to an end. In both the Bronze Age developed along similar lines, and produced similar ornaments, but with what we may call local differences of idiom. The Iron Age began in Scandinavia a little later than in Ireland: Christianity, also, was of later introduction. Both countries were left untouched by Roman conquerors. Ireland, being rich in gold and nearer to the great trade-routes, was in some respects more fortunately placed than Scandinavia: but Scandinavia, owing to its proximity to Russia, could enter into an almost direct contact with Oriental influences, which had only a secondary effect upon Irish art. The culture of the two countries was thus very similar, though with differences which are most instructive for a study of the effect of environment upon the manifestations of civilization.

The Scandinavians began to interfere in European politics, in a small and tentative way, in the sixth century. It is on record that they then invaded Friesland. In the following century pirates from overseas, presumably Scandinavians, raided "Torach" (understood to be Tory Island) and the Hebridean island of Eigg. These attacks were comparatively unimportant, and did not prevent peaceful intercourse between Scandinavia and the West: they do not really foreshadow the tragic events that were destined to come.

As the eighth century was coming to an end, this "peaceful penetration" suddenly gave place to bold and ruthless aggression. From that time onward for over two centuries the name of the Northmen is a name of dread over all the countries within access by way of the North Sea. In criticizing our authorities on this time of stress, we must bear in mind that most of our knowledge of the proceedings of the pirates is derived from monastic chronicles: and as monasteries were the chief victims of the raiders, we cannot expect from them a favourable account of their doings. In any study of ancient historical evidence, we must always keep in mind the point of view of its writers. We remember that during the war of 1914-18, certain newspapers gave the German, as well as the English, versions of incidents that were of interest to both sides, and that these narratives, which claimed to report, not opinions but facts, were often diametrically contradictory in almost every detail. Mr. J. W. Jeudwine has very persuasively shewn that we should at least keep an open mind even about a historical axiom so generally accepted as the worthlessness of John, sometime King of England;[1] because all that we know of him is derived from monastic chroniclers, and

[1] *The Manufacture of Historical Material*, chaps. xvi, xvii.

the chroniclers in question had no special reason to be tender with John's reputation. No seeker after truth would go to an inmate of a monastery that had been oppressed and spoiled for an impartial portrait of the spoiler and the oppressor, any more than he would apply to an ardent hero-worshipper for a convincing delineation of his idol.

Still, making every allowance for one-sidedness in our historical sources, we cannot question the central fact, that the Scandinavians made themselves dreaded throughout Northern Europe from the end of the eighth century onward for a considerable time. Various reasons have been assigned for this development of piracy: the increase of the population in Scandinavia, beyond what the country could support; the irritation produced among the still pagan populations at the high-handed methods adopted by Charlemagne for the propagation of Christianity; at a later date, after the movement had well begun, the centralizing policy of the Scandinavian kings, notably Haraldr, surnamed Hárfagre, King of Norway, who about this time were seeking to absorb in their own persons the whole of the kingly authority—thus closing the doors of advancement to ambitious young chieftains. These, debarred from distinguishing themselves at home, sought fame abroad. A parallel condition of things may be traced in Irish history. The great period of Irish colonization in Wales and in Scotland also corresponds to the time of the expansion of the power of the central kings.[1]

Few things more graphically bring home to us the paralysing terror which the Scandinavians produced, in the lands at their mercy, than a single quatrain scribbled in the manuscript of Priscian which, though now at Saint-Gall, must have been written somewhere on the Irish sea-coast. The writer expresses his joy that a wintry storm is raging; for at least this one turbulent night he will sleep secure from the peril of the Northmen.

It is worth a passing notice that the Irish chroniclers distinguish carefully between the Víkings of Denmark and those of Norway, calling them respectively the *Dubh-ghaill*, the "Black Foreigners," and the *Fionn-ghaill*, the "White Foreigners". The Danes are as a whole of darker complexion than the Norsemen, and the fact was duly observed and recorded by the Irish chroniclers, with that accuracy of statement which was at one time a characteristic of Irish work.

[1] A most convenient and compact history of the Víking raids will be found in Professor A. Mawer's handbook of the subject, in the *Cambridge Manuals of Science and Literature*.

The Norsemen in Ireland

Attacks by White Foreigners began in Ireland about the year 795. A fleet sailed round the north of Scotland, passed down the west coast, and ravaged Skye, and then, coming further south, raided the community that lived on Rachra—which may be either Rathlin Island or the island now known by its Scandinavian name, Lamb-ey, the Lamb Island. This is only one of many traces which the invaders have left in the topographical names round Dublin (itself a Norse foundation). Oxmanstown, Dalkey, Leixlip, Howth, Ireland's Eye, all tell us of the strong hand of the White Foreigners. We mention the Danes whenever we speak of *Baldoyle*, the "town of the Black Foreigners"—not an inappropriate name for a place that has the misfortune of periodic invasions by the sort of people that frequent race-meetings.

From 795 onward, the raids on the Irish coast became more and more frequent. In 807 Sligo was plundered, and the invaders marched inland as far as Roscommon. In 811 they plundered Munster. By 834 they had made their hand felt over the whole country.

The first raids were mere swoops: the invaders fell upon an unprotected community, carried off its property, and departed. But by the date last mentioned the Vikings had established themselves at various points along the coasts, especially at the river-estuaries, and they used these as bases from which to attack the settlements along the river banks. It was in this way that Waterford on the Suir, Limerick on the Shannon, and Dublin, on the "black pool" at the mouth of the Ruirtheach, began their municipal existence.[1] The last-named was the first to be founded (A.D. 839). Another settlement was made on the coast of Louth, in the same year, but it did not endure.

From this time onward there was a regular series of wars between the Norsemen and the Irish, in which now the one side, now the other, was victorious. And yet this ninth century witnessed the production in Ireland of some of the greatest works of art in the world. The explanation of this anomaly is very simple. Even before the European War of 1914-18, a battle was, to our ideas, a big thing. But just as the great battles of the past have been dwarfed into insignificance by that catastrophe, so, if we could by some time-machine become spectators of the battles described in the Irish *Annals*, we should regard them as nothing more than

[1] For the early history of this foundation see L. J. Vogt, *Dublin som norsk by* (Oslo 1896).

slightly intensified versions of the proceedings at Donnybrook Fair. They were quarrels or faction-fights between small groups of men; the Annalists, having no standard of comparison by which to measure their importance, have glorified them into mighty engagements. Probably there was as much peace in Ireland as in any other part of Europe at the time. The amateur historians who describe Ireland before the Anglo-Norman invasion as a bear-garden of warring tribes forget that in such circumstances the production of works of art such as still exist for us to see and handle would have been an absolute impossibility. The standpoint of the Annalists who report these events must always be kept in view in utilizing their statements.

Thórgestr

Only one of the Scandinavian raiders possesses for us what may be called a "personality". This was Thórgestr—or Turgeis, as the Irish Annalists call him—who first appears on the scene in about A.D. 840. He sacked Armagh, and made himself king "over the Foreigners of Ireland". In fact, he did more than this; he made himself king of the North of Ireland. He maintained fleets on Loch nEach and Loch Ree, by means of which he raided the monasteries around those lakes. His wife Auðr—called "Ota" by Irish writers—converted the cathedral of Clonmacnois into a pagan sanctuary, where, seated on the High Altar, she delivered oracles. For three years was this unholy monarchy maintained; but at last, in the year 844, Mael-Shechlainn I, King of Ireland, became possessed of the person of Thórgestr by a ruse. Thórgestr had sent to him demanding that he, the King of Ireland, should deliver up to him his daughter. Mael-Shechlainn pretended to consent, and promised that the princess, with her women attendants, should proceed forthwith to the Víking chief. The procession arrived, but the princess and her women were not there; in their stead were the strongest beardless youths whom the king could find, clad in women's apparel. Coming up to Thórgestr, they suddenly seized him and carried him off to their master, who, heedless of his defiant attitude, caused him to be executed by drowning.

The Scandinavians were by no means united among themselves. Víkingism was largely developed by internal dissensions in the country of its origin; and these dissensions continued in the countries to which it penetrated. The King of Norway saw his best fighting men sailing off to seek conquests on their own account, and he did not feel inclined to let them

go without a struggle. In the year 849 he sent a fleet to Dublin, not so much for aggression on the country itself, as to bring the Norsemen there established more completely under his control; and this action was repeated several times in the course of the history. When the Anglo-Normans took over the country, history repeated itself: Henry II and John had to look very sharply after their royal prerogatives among the barons, who, if unchecked, would have played the part of sovereigns in the domains which had fallen to their share.

The Danes in Ireland

Hitherto we have had to deal only with the Norsemen. The Danes seem to have made their first appearance in the year 851; and if we may believe our authorities, they came, not as enemies of the Irish, but of the Norsemen. It is alleged that on their arrival these new heathen put themselves under the protection of St Patrick, who, they thought, would surely avenge himself upon the Norsemen for all the injury which they had inflicted upon the churches of his foundation: but the story is probably a pious fable rather than sober history. In any case, the Norsemen were defeated.

From this time onward the internal history of Ireland becomes bewildering in its complexity. We read the *Annals* and other historical documents, and we find them occupied with the devious intrigues of different leaders. Some king or local lord leads an army against the Foreigners, Black or White, and inflicts a defeat upon them. We turn the page and find, a year or two later, that the same king has not only made up the quarrel, but has enlisted the sympathy and assistance of those very same Foreigners against some rival Irish chieftain. Having, by such studies, impressed ourselves with the chaotic state of the country, we visit our museums, or we wander among the ruins of the country-side, and we find, at this very same time, works of art being produced which the costliness of labour would now make it all but impossible to carry out. Nothing more clearly shews the relative insignificance of the deeds of blood recorded, and the necessity of preserving a sense of proportion in studying the histories. It has been a fashion to make the "Danes" scapegoats whenever any piles of human bones have been found in the country. In the cave of Dunmore, near Kilkenny, such a pile was found, and the explanation of a "Danish slaughter" at once put forward.[1] There is really no evidence that the bodies to which

[1] A. W. Foot, "An account of a visit to the cave of Dunmore, Co. Kilkenny, with some remarks on human remains found therein," JRHAAI xi p. 65. See also PRIA xii p. 168.

these bones had belonged were all deposited at one and the same time. Near Dublin, in digging the foundations of a house in Aylesbury Road, a great heap of bones was unearthed. There is no reason to suppose that this was anything more romantic than a plague-pit: but macabre horrors of Scandinavian brutality were conjured up by the too vivid imagination of those who made this discovery known.[1]

In 853 Óláfr and his brother Ívárr, sons, possibly, of the famous Ragnarr Loðbrók, established the chief centre of Scandinavian rule in Ireland (at Dublin), and patched up some sort of peace with the Danes. But they were not uniformly victorious. They quarrelled among themselves, thus giving the Irish the opportunity of seizing the city in 902. Thus driven out, they took refuge in Scotland or in England; but they returned in 916, under the leadership of Sigtryggr, grandson of Ívárr. Niall Black-knee—so-called from his un-Irish assumption of the Scandinavian custom of wearing defensive armour—attempted to rescue the city with a coalition of sub-kings under his leadership: but he was defeated in 917 in a great battle fought at a place called Ceall mo-Shamóg, somewhere about Island Bridge, near Dublin: *not* the mountain to the south now called "Kilmashóg". Niall's son, Muircertach of the Leather Cloaks, defeated them and took hostages of them. Ceallachán of Cashel fought with the southern Víkings. We need not follow out here all the details of the wars; we content ourselves with noting that Mael-Shechlainn II, the last and greatest of all the Irish kings, when he came to the throne in 979, inflicted a severe defeat upon them at Tara, and then, making his way to Dublin, occupied it, and compelled the Norsemen to set at liberty all their hostages. The victories of Mael-Shechlainn were, however, neutralized by the struggle which he was compelled to maintain against the ambitious Munster king Brían; so that, in spite of them, the Norsemen increased in strength. Occasionally Brían used them, in his machinations to secure the High-kingship. In this great aim of his life he finally succeeded, and then made a compact with the Norse king of Dublin, he marrying the Norse king's daughter Gormfhlaith, and giving his own daughter to the Foreigner. But Gormfhlaith soon quarrelled with her senile husband, and stirred up her own people against him. They came and met the king at the side of the river Tolka at Drumcondra, north of Dublin, on Good Friday, 1014.[2] A severe defeat was inflicted on the Norsemen, though Brían himself was slain. It

[1] W. Frazer, "The Aylesbury-road sepulchral mound," PRIA xvi p. 116.

[2] A Scandinavian pin found at Clontarf in 1905 may conceivably be a relic of this battle: see JRSAI xxxvi p. 219, and references there.

is not correct to suppose, as is commonly done, that the Foreigners were annihilated or driven out of the country; but their spirit was broken. They settled down quietly in their cities, and were gradually assimilated with the natives of the country.

Scandinavian Relics in Ireland

Considering the deep impression which the Scandinavians made upon Ireland during the time of their occupation, it is surprising that so few direct traces of their presence are to be found in the country. Notwithstanding their initial hostility, a process of assimilation must have set in very early. There is but one Víking cemetery known as yet: it was discovered about the middle of the nineteenth century at Island Bridge, near Dublin, and the objects found in it are to be seen in the Royal Irish Academy's collection.[1] They consist of iron swords with long straight blades and with chased and inlaid handles; scales and weights, brooches, especially that essentially Scandinavian type known from its shape as "The Tortoise Brooch," and other personal adornments. Tortoise brooches have also been found in Cos. Wicklow and Down.[2] Such of these objects as can be dated are of a rather early type.

Scandinavian silver objects are not uncommon in the country. They consist chiefly of bracelets, and are usually in the form of roughly-made ribbon-like strips of metal, bent into a curve, and ornamented on the outer surface with punch-impressions of various shapes. These are actually among the earliest ornaments of silver which the country has yielded.[3] A few bracelets are made of coarse plaited silver wire. An earring made of a bronze wire elaborately twisted, from Portlaw (Waterford) probably has the same origin.[4] Ornaments of gold are naturally rarer, but they are not unknown: Armstrong figures four examples, as well as a fine example consisting of a loop of gold surrounded with twisted gold wire from Virginia (Cavan), now in the British Museum.[5]

It is especially strange that there are very few Runic

[1] G. Coffey and E. C. R. Armstrong, "Scandinavian objects found at Island-Bridge and Kilmainham," PRIA xxviii p. 107, where full illustrations and references to the earlier literature will be found.

[2] See JRSAI xxxii p. 71, xxxvi p. 451. See also a communication by Dr. R. Cochrane in *Proc. Soc. Antiqu. Lond.*, Ser. II vol. xxi p. 72.

[3] See Wilde's *Catalogue of the Silver and Ecclesiastical Antiquities in the Museum of the Royal Irish Academy*, edited by Armstrong, PRIA xxxii p. 287, especially plate xxv.

[4] Figured in JRHAAI xix p. 88.

[5] Armstrong, "Notes on some Irish Gold Ornaments," JRSAI lii pp. 136, 137; and references there to his *Gold Catalogue*.

inscriptions in Ireland, for Runic inscriptions are usually found in profusion wherever the Northmen made settlements. There are in Ireland only four, of which one, on the Blasket Islands, is a mere fragment with three letters upon it. The other three are all interesting monuments of the assimilation of the foreigners with the native people. One at Killaloe, reads THORKRIM RISTI KRUS THINA,[1] and shews to us a Scandinavian called Thórgrim, who, notwithstanding his heathenish name, must have been a Christian, erecting a memorial-cross. Another, on a strip of bronze which must at one time have been attached to a sword-scabbard, from Greenmount (Louth), reads TOMNALL SELSHOFOTH A SOERTH (TH)ETA, and shews us an Irishman, to judge from his Celtic name, sporting a Norse nickname, "Seal's-head" as he writes the notice that he "owns this sword".[2] The third, in mixed Runic and Lombardic characters, was found in the ruins of the monastery of Nendrum, and if the interpretation that has been given of the reading of this difficult fragment be correct, it shews us a Norseman actually becoming abbot of this native house.[3] The only inscription found in the Island Bridge cemetery—a maker's or owner's name on a sword-hilt—is inscribed in Lombardic, not in Runic, characters.

Irish Relics in Scandinavia

The plundering of the monasteries and the wealthy houses in Ireland naturally led to the transfer to Scandinavia of Irish works of art. Indeed, there exist in Scandinavian museums works of art of Irish origin of types no longer extant in Ireland: and the archæologists of Scandinavia are finding a promising field of research in the influence of these imported objects on the art of Scandinavia itself. Similarly, we can without difficulty trace the influence of the imported Scandinavian art upon the native products of the later centuries of Celtic Ireland.[4]

[1] See PRIA xxxiii p. 493.

[2] JRHAAI xi pp. 279, 471: Stephens, *Old-Northern Runic Monuments*, vol. iii p. 307.

[3] H. C. Lawlor, *The Monastery of St Mochaoi of Nendrum* (Belfast 1925) p. 70.

[4] As examples of Irish objects which have thus drifted abroad may be mentioned the well-known Copenhagen shrine (see Crawford's description in JRSAI liii p. 85 and references there; especially a fine illustration in *Proc. Soc. Antiqu. Lond.*, II xxxi p. 337): a bucket from Björkö, Sweden (*Antiquaries' Journal* v p. 168, after *Fornvännen*, 1924 p. 142 ff.): a cruciform ornament found in a cemetery in Finland (*Antiquaries' Journal* v p. 169). See also Johs. Bøe, "An ornamented Celtic Bronze Ornament, found in a Norwegian grave," *Bergens Museums Aarbok*, 1924-25: *hist.-antikv. Række* no. 4, where a large number of Celtic ornaments found and preserved in Norway are illustrated.

Mutual Influence of Ireland and Scandinavia

In endeavouring to follow these influences, we must bear in mind the differences between Teutonic and Celtic art, of which something has already been said in Chapter VI. A good field in which to study this difference is the Isle of Man, the sculptured monuments of which fall into two series, an earlier Celtic, and a later Scandinavian, the latter being especially distinguished by the presence of Runic inscriptions.[1] At first sight the ornamental devices look similar; but when minutely studied differences begin to make their appearance, especially in the treatment of the interlacements.

The bands in Scandinavian interlacements display no such uniformity in breadth, or in the design of the patterns which they form, as in Irish work. They tend to bifurcate, and they are often ornamented with pellets, rope-patterns, and other applied decoration. There is one pattern which is extremely common on the Isle of Man, and, indeed, is especially characteristic of the monuments there. It is what is called the vertebra, or chain-band pattern, and consists of an ingenious system of interwoven links. Outside of the Isle of Man it is very rare; something like it appears on the Gosforth Cross in Cumberland. There is only one Irish example of this ornament, in a tiny decoration of one of the corners of the shrine of the Gospels of St Molaise.[2]

The influence of the Teutonic form of interlacement and of its zoomorphic origin is plainly to be seen in Irish work of the eleventh and twelfth centuries. Though there are examples of pure geometrical interlacement at this late date—as on a cross on the island of Inis Cealtra—in the majority of the latest specimens of art the interlacements take the form of dragon-like knots and contortions. The development of such figures in the later art of Ireland is, in all probability, due to Scandinavian influence. On the stone crosses of Tuam (Galway), and Dysert O'Dea (Clare), both of which belong to the twelfth century, the dragonesque knotwork entirely supersedes the geometrical interlacements found on earlier crosses.

Further examples of this zoomorphizing influence may be seen in such works as the arm-shrine of St Laichtín and the Cross of Cong, already described. The interlacements of the former of these objects are not zoomorphic, but they are much

[1] It should, however, be noticed that some of these inscriptions contain Celtic names, such as *Malumkun* (i.e. Mael-Lomchon) and *Murkialu* (i.e. Muirgheal, anglicized "Muriel").

[2] The sculptures of the Isle of Man can be conveniently studied in the exhaustive work of P. M. C. Kermode, *Manx Crosses* (London 1907).

more free than in pure Celtic work; one might be tempted to say that they approach an Arabesque form. The names on the inscriptions of the shrine, which are only partially legible, date it to about A.D. 1120: among them we may read the name of Cormac mac Carthaigh, the builder of the beautiful chapel at Cashel which bears his name. In the croft over the roof of this chapel there is a remarkable stone coffer, or sarcophagus, with an elaborate carving in the same Scandinavian style.

It is not implied that contorted animals are unknown in pure Celtic art before the Scandinavian inroads. They are, indeed, found in such comparatively early works as the *Gospels of Durrow*. But they are used with restraint; we have only to compare this work with later MSS., such as the *Garland of Howth* or the *Psalter of Ricemarch* to realize the extent of the Scandinavian influence in this respect.

Such art-influences could not act and react if the Scandinavians had remained aloof from the native Irish, having no relations with them save those of plunderers; and if the Irish had boycotted their Scandinavian guests. The Round Towers bear witness to the hostile relations between the two peoples. But almost from the first there must also have been peaceful relations between them. At the beginning of the raids, when the Scandinavians were carrying all before them, we read that such was the terror which they inspired that many of the Irish forsook their baptism and joined themselves unto them. But before long a converse process set in, not less real for all that the *Annals* say little about it. Reading between the lines of the history, we can see Christianity making its way among the Foreigners, who were at first its deadly foes. Of this leavening we have a monument in the Killaloe Runic stone, just mentioned, and still more imposingly, in Christchurch Cathedral in Dublin, which is a foundation of the Scandinavian kings of that city.

Though it is a little outside the subject of this work, it may be worth just noticing in passing that the Irish and the Scandinavians exercised a mutual linguistic, as well as an artistic, influence.[1]

The political and economic innovations which the Scandinavians made in Ireland must not be overlooked. So far as we know, the Scandinavian kings of Ireland were the first in the country to strike a coinage. The slowness of the native Irish to adopt this convenience is very singular. Notwithstanding the high organization of society, which is abundantly testified to in the pages of the legal tracts, and although the

[1] For the details of the evidence of this, see Carl J. S. Marstrander's elaborate study, *Bidrag til det norske Sprogs Historie i Irland* (Oslo 1915).

occasional discovery of Saxon coins of the tenth century shews that the nature of money was not unknown,[1] all estimates of value are based on a standard of cattle or slaves, and all pecuniary transactions take the form of barter based on such valuations. The Scandinavian kings issued silver pennies, resembling in character those of the contemporary Anglo-Saxon kings, and evidently based upon their model. After the Scandinavians had shewn the way, the practice of coining money seems to have been followed by some of the native authorities: but the subject is still obscure, and calls for further research. According to the *Annals of Clonmacnois*, money was coined at that important ecclesiastical establishment in the year 1170.[2] Certain unilateral and bilateral bracteates [3] have been found in Ireland in a few places. These are all without inscription, and there is nothing to shew what their origin may be, though they are clearly copied either from the Scandinavian coins of Dublin, or else from certain types of the coins of the first Norman kings.[4] More recently an inscribed coin, issued by a prince of the southern Ui Neill, has been published. It was stamped apparently at Limerick by a Saxon moneyer named Blanwise.[5]

Moreover, it is due to the Scandinavians to credit them with the establishment of municipal life in Ireland. They founded the chief towns: and although the foundations were in their origin the base-camps of marauding expeditions, in time they became centres of commercial enterprise, with relations overseas. In the year 1130 a certain thief stole treasures from Clonmacnois, and endeavoured to make off with them. He proceeded to three different ports—first to Cork, then to Lismore, and finally to Waterford. In each port he found a ship about to sail. But his sin found him out; at every place something happened, attributed to a miraculous intervention, which prevented the ship wherein he took passage from sailing.

[1] See for such a discovery, JKAS viii p. 375: PRIA iv p. 394.

[2] *Annals of Clonmacnois*, ed. Murphy, p. 214.

[3] A *bracteate* is a disc of thin metal, with a device impressed upon one side, so that it stands out in relief upon the other. In a bilateral bracteate two such discs are secured together edge to edge, so as to resemble a coin with a device in relief on each face.

[4] See Petrie, *Round Towers and Ancient Architecture of Ireland* (Dublin 1845) p. 228: Aquilla Smith, "When was money first coined in Ireland?" *Numismatic Chronicle* III ii p. 318: "Was ecclesiastical money coined at Clonmacnoise?" JRHAAI xvii p. 55, where a number of illustrations of these enigmatical pieces are given. On the Scandinavian coins see L. J. Vogt, *Dublin som norsk by* p. 362 ff.: Bernard Roth, "The Coins of the Danish Kings of Ireland," *British Numismatic Soc.* vi p. 55: H. A. Parsons, "The chronology of the Hiberno-Danish coinage," *ibid.* vol. xvii. These papers have many beautiful photographic illustrations.

[5] H. A. Parsons, "An Irish eleventh-century coin of the Southern O'Neill," *British Numismatic Journal* vol. xvi.

Thus he was unable to escape with his plunder, and was eventually captured and hanged. Interpret the details of the story as we please, it is, at any rate, good evidence that trading-ports had come into existence by the beginning of the twelfth century, and that a traveller might reasonably expect to find there a ship at his service.

On the whole, the Scandinavians gave more than they took away. They pillaged cruelly: yet the time of their domination was a time of great activity in art production; and from a blend of the native and of the imported styles a composite art of great beauty came into being.[1]

Ireland after the Norman Invasion

As we pass across the boundary between Celtic and Mediæval Ireland we become conscious of a change in the atmosphere. In many ways the earlier period was, no doubt, a semi-barbarism. If we could transport ourselves along with our modern ideas of comfort back into the Ireland of those days, we should find ourselves obliged to exercise a not altogether unwholesome Spartanism.[2] Yet the barbarism was tempered by an eager enthusiasm, by a forward striving; and it made an astonishing series of conquests of difficulties in the decorative arts. In the later period, on the other hand, we see nothing but enthusiasms crushed; nothing but a material and moral degeneration and decay.

In speaking of the antiquities of this period, it will be unnecessary to make more than passing allusions to those remains which are English in all but geographical situation. Such subjects as cross-legged effigies,[3] pavement-tiles,[4] Plantagenet coins, arms and armour, and the like, are a branch of English archæology, and even their extension to Ireland is much more a matter of English than of Irish interest.

As a digression suggested by this remark on non-Irish antiquities in Ireland, we may conveniently mention here that not the least curious side-issue in the study of Irish archæology is that raised by the unexpected appearance in the country of objects of *remote* foreign provenance. Some foreign importations do not greatly trouble us. A Hallstatt sword or an Etruscan *harpago* might have arrived by very simple means.

[1] For further details about the Scandinavians in Ireland see A. Walsh, *Scandinavian Relations with Ireland during the Viking Period* (Dublin 1922).

[2] After all, we might say the same thing of the eighteenth century!

[3] Those of Kilkenny are described by Rev. J. Graves, JKAS ii p. 63.

[4] W. Frazer, "Early pavement tiles in Ireland," JRSAI xxiv pp. 136, 171. See also PRIA ii p. 353.

We are not greatly surprised when we find a Gaulish La Tène sword in a western inlet of the sea, or a few Gallo-Roman statuettes in bronze (such as the three or four in the Petrie collection, now in the possession of the Royal Irish Academy).[1] Nor does the occasional appearance of Roman coins appear unnatural. It is when objects of *Asiatic* provenance make their appearance that questions are suggested more easy to ask than to answer. Why should a bronze pot of Chinese manufacture have been discovered, in the eighteenth century, two feet beneath the surface, at Fahan (Donegal) ? [2] Why should an Indian bull mask have come to light in a bog on or near the Galtee Mountains ? [3] Most curious, perhaps, of all these wanderers are the porcelain seals, apparently of considerable antiquity, bearing inscriptions in archaic Chinese characters, which have been found scattered about over the surface of Ireland. The provenance has not always been recorded ; but specimens are reported from Carlow, Westmeath, Tipperary, Cork, Wexford, Antrim, and possibly one or two other counties. They came to light in the eighteenth century and on to about 1850, after which no further discovery seems to have taken place. The inscriptions appear to be either names or sententious maxims ; translations have been supplied by different Chinese authorities very far from mutually consistent ; one unlearned in the language cannot presume to decide between them. Most of these seals are in the form of a cubical block of porcelain, with a monkey or some such animal squatting on the top, and with the inscription on the bottom.[4]

Arts in Ireland after the Norman Invasion

In our studies of the arts of Celtic Ireland in the foregoing chapters, we have seen the rise and development of schools of illumination, of metal-working, of sculpture, and of architecture Let us now see what became of these several crafts.

Illumination reached its zenith some centuries before the Anglo-Norman invasion, and was already moribund in Ireland when that event took place. It is, therefore, not surprising to find that in Mediæval Ireland it was practically extinguished.

[1] With them are to be classed the small bronze figures of boars, illustrated JRSAI liii p. 29. These are certainly Gaulish.

[2] Vallancey, *Collectanea de rebus hibernicis* iv p. 71 : the object is now in the Royal Irish Academy collection.

[3] Illustrated in JRHAAI xv p. 566. The statements about this discovery are disputed.

[4] Everything known about these seals has been collected together in an essay by Edmund Getty, *Notices of Chinese Seals Found in Ireland* (Belfast 1850). He enumerates sixty-one specimens, most of them porcelain, but some of them carved in wood. See further, PRIA i p. 381, x p. 172 : Wilde, *Catalogue* p. 196.

Large manuscripts continued to be written, but their interest is literary, not artistic. We sometimes find ornamental initial letters, often quite well executed: but as a rule they are mere pen sketches, or at most enriched with blobs of colour; and they cannot compare with even the poorest of the Gospel manuscripts of the earlier period. Nor can we trace any effort to assimilate the teaching of the contemporary schools of illumination in England or on the Continent, which have given us so many missals, books of hours, antiphonaries, and other liturgical manuscripts, with exquisite illuminations. Beside such treasures the trivial sketches of a table attendant in the banquet-hall of Tara (*Book of Leinster*) of the Crucifixion (*Speckled Book*), or of a ship (*Book of Ballymote*) are truly dismal.

The achievements in metal-work are little better. From the Olympic heights on which were produced the Ardach Chalice or the Cong Cross, we descend into the Avernus whence issued the crude outer coverings of the *Domhnach Airgid* and the *Cathach* shrines.[1] These are ornamented with badly-drawn figures *repoussé*, and where they are broken they are carelessly patched with incongruous fragments, every rivet of which whispers that infamous *cliché* of speech, " Ah, sure, it'll do "— a saying that may almost be called the motto of post-Norman Ireland. With the concomitant practice of bull-making and blundering, this is a growth of modern times. The ancient jurists who squeezed out every drop of juice from the legal problems over which they debated—*teste* the summaries of those debates, which form the substance of the Brehon law tracts: the scribes of the *Gospels of Kells* and similar manuscripts, with their superhuman accuracy of hand and eye: the historians and annalists, painfully compiling tedious lists of events and dates and, as time rolls on, still striving against ever-increasing difficulties to keep alive the ancient spirit of the country—these were not the men to console themselves with that feeble phrase, wherewith laziness and incompetence consoles itself for its failures.

There are extant a few processional crosses and other pieces of ecclesiastical furniture in bronze. Probably most of these are imported from abroad. Few of them are of any special artistic merit; most of them are bad.[2]

The art of sculpture is in a state a little less hopeless. Sculptured monuments are to be found throughout the country in

[1] See Armstrong's description in PRIA xxxiii p. 390, xxxiv p. 96.

[2] Typical examples from Oldbridge (Meath) are figured, and rather too eulogistically described by Mr. Armstrong, JRSAI xlv p. 27. For others see Coffey, *Guide* pp. 80, 81.

considerable numbers and of all degrees of elaboration—ranging from simple slabs bearing plain crosses to costly altar-tombs with recumbent effigies and subsidiary figures. Sculptured decoration is also to be found in the mediæval church buildings. But Ireland has no convenient soft stone, like the chalky clunch at the disposal of the builders in Eastern England, which, being cut almost as easily as butter, makes possible rich interiors such as the Lady Chapel of Ely Cathedral. It is, of course, useless for outdoor work, and Irish antiquaries have at least the cold consolation that, as the great majority of the ancient church buildings of Ireland are roofless derelicts, owing to a combination of historical circumstances which it is outside our province to discuss, any such sculpture, had it existed, would long ago have been utterly destroyed by the weather.

The recumbent grave-stones of the thirteenth and fourteenth centuries are, as a rule, hardly distinguishable from contemporary monuments of the same type in England, whence the style was no doubt imported. Their decoration consists of floreated crosses in relief, with or without an accompanying inscription. The lettering of the latter is Gothic or Lombardic, and it generally runs around the outer edge of the slab. The language of the inscription is either Latin or Norman-French, and, later, English; it is a very noteworthy fact that Irish is hardly ever used for monumental inscriptions in mediæval Ireland. Often there is no inscription; sometimes the only personal information afforded is an indication of the sex of the deceased—a sword to typify a man, a scissors for a woman.[1] Sometimes, perhaps more frequently in proportion in Ireland than in England, a head, apparently intended as a portrait of the deceased, is sculptured in relief at the head of the floreated cross or on its intersection; fine examples of this type of monument are to be seen at Kells [2] (Kilkenny). Memorial Brasses, so characteristic of England, are extremely rare in Ireland. There were some fine examples in the cathedrals of Dublin, which have all disappeared since the seventeenth century, when rough sketches of them were made by the traveller Thomas Dineley.[3] Two or three very poor and late examples still remain in St Patrick's Cathedral, in Kilkenny Cathedral and in Santry (Dublin). Matrices exist in Leighlin Cathedral,[4] and possibly in a few other places.

In Ireland the monumental slabs of the sixteenth and seven-

[1] An example with a scissors at Holywood (Down) will be found illustrated in JRHAAI xv p. 80.

[2] Illustrated JKAS viii plate facing p. 187.

[3] They are reproduced in JRSAI xliii p. 281 ff.

[4] J. R. Garstin, " On some sixteenth-century inscriptions in Leighlin Cathedral," PRIA xvi p. 424.

teenth centuries are more interesting than the earlier mediæval monuments of this type. They are in a more indigenous style. Usually they bear a large central cross, accompanied in many cases with the initials " I H S ". In most cases the inscription, when there is any, is in capital letters, and in English. The design of many of these crosses is very interesting, in that they reveal a still active struggle between the Gothic or Renaissance spirit and the earlier Celtic style, with its interest in geometrical interlacements. This is an artistic parallel to the similar struggle which was at the same time in progress between the traditions of the native Bardic schools and the imported ideals. A notable example of this struggle in sculpture will be seen in a slab at Killybegs (Donegal).[1]

In addition to the cross, the slab often bears an indication of the craft followed in life by the man who lies beneath—the plough of the farmer, the knife of the leather-cutter, the anvil and pincers of the smith. Fine examples of such slabs are to be seen in large numbers in the ruined Church of the Dominicans at Athenry,[2] or in Kilkenny Cathedral. Co. Kilkenny is probably the richest in Ireland in mediæval ecclesiastical remains, and there are many slabs of this kind in its ruined country churches. These not infrequently bear representations of the instruments of the Passion,[3] in which the sculptor betrays a desire to make the series as exhaustive as possible, ransacking legend as well as the Gospel accounts for details. Thus he frequently represents St Peter's cock as seated on the edge of the pot in which, as a silly fable relates, it was being cooked, when it was miraculously raised to crow for the confusion of the false Apostle.[4]

The figure sculpture is never first-rate; indeed, it is often artistically grotesque. It would be hard to find anything worse, anywhere, than the carving of St Sebastian, formerly on a jamb-stone of Kilvoydane Church (Clare).[5] Rather better is some fifteenth-century work at Cashel, with spirited figures of animals: one of these displays an amusing conception of an elephant with its howdah, which terminates upward with the stepped battlement characteristic of Irish buildings of that date.[6] Inferior though they be, the human figures are always worthy of study, on account of the information which they have to offer regarding costume, armour, coiffure, and such

[1] Figured in JRHAAI xii p. 129. [2] Illustrated in JRSAI xliii p. 198 ff.
[3] See Margaret Stokes, "The Instruments of the Passion," JRSAI xxviii p. 137.
[4] See Rev. St J. D. Seymour's study of this legend, "The Cock and Pot," JRSAI li p. 147.
[5] Figured in JRSAI xxx p. 30. [6] Figured in JRSAI xlii p. 148.

details.[1] There are a few examples of the perverted humility, prevalent in England during the latter part of the fifteenth century and the beginning of the sixteenth, which found its expression in the representation of the deceased as a decaying corpse. There is a most repulsively realistic example of this in the Goulding monument in the churchyard of St Peter's, Drocheda: [2] another exists at Cork.[3]

One odd variety of figure sculpture demands a paragraph or two: the so-called "sheela-na-gigs". This name is as senseless as it is grotesque; it is said to have been extemporized by a countryman to satisfy some amateur investigator's thirst for traditional lore, and to have been misheard and misrendered by the amateur, owing to his unfamiliarity with the Irish language. What the countryman said was probably *Síle na gcich*, "Sheila of the Breasts"—a term which bears its modernity on the face of it, for though the feminine name "Sheila," however it may be spelt, has now become well naturalized in Ireland, it is merely a modern adaptation of the foreign name "Celia".

Whatever name we may bestow upon these carvings, they are representations of females, usually nude, with crossed legs, and with a certain emphasis laid upon the sexual parts. They are found built into the walls of Romanesque churches and of mediæval castles: their range of date is not quite certain, but it may be approximately laid between A.D. 900 and 1300. They are *never* found in the Celtic sculpture of the crosses. The only possible exception to this is on a pillar-stone called "The Cross of Adamnan" at Tara: but I have elsewhere tried to shew that this monument is not the stump of a cross at all, and that there are distinct analogies between the figure sculptured upon it and the representations found in Gaul of the Continental Celtic god Cernunnos.[4] It is possible that we are to see here something of the origin of these strange figures.

There can be very little question that they are the monuments of a pagan recrudescence. They have all the appearance of representing some goddess of fertility, who would naturally be associated with good luck. The moralists of the earlier days of Christianity in Ireland, who worked over the literature in order to expunge all traces of paganism from it, would sternly suppress such a cult: but it may well have come

[1] A good example is the famous O'Connor tomb at Roscommon: see photographs in JRSAI liv p. 89.

[2] Illustrated in *Journal of the Association for Preserving the Memorials of the Dead in Ireland* for 1899; reproduced in JCHAS II vol. vi p. 113.

[3] Figured in *Dublin Penny Journal*, 20 July 1833 p. 21.

[4] See PRIA xxiv p. 254.

to the surface again during the Scandinavian turmoil, when some of the Irish "forsook their baptism" and joined themselves to the pagans. It might possibly happen that at that time even some of the ecclesiastics would be tempted to place these objectionable figures on their church walls, in order that they might "make an ugly face" at the invader, and so scare him away. Did not St Paul himself dwell upon the advantages of being "all things to all men"? Might they not have argued, If these pagan pirates shew no respect for the Cross, let us try some other expedient which they will understand? Some such explanation may, perhaps, be suggested for the appearance of these figures on churches. Once established, their use may well have continued as mere luck-bringers and averters of the evil eye.[1] They are by no means confined to Ireland—there is a specimen over a window of the mediæval nunnery on the island of Iona, and another at Oaksey, Wiltshire.[2]

ARCHITECTURE: CHURCHES

There are many monuments of architecture in the country, nearly all in a sad state of ruin. Scotland and Ireland are probably the only Christian countries in the world in which very nearly all the ancient buildings consecrated to Christian worship are roofless and deserted. How this comes to pass, let the historian explain.

The mediæval church architecture in Ireland, as in the rest of Western Europe, is Gothic in style. But the Gothic in Ireland differs from that of the neighbouring countries in a remarkable and important circumstance. Elsewhere the Gothic styles were an organic growth, passing from stage to stage in a natural evolution. In Ireland Gothic was a transplanted sapling, which never became acclimatized.

To the last, the native architects could never master the principles of Gothic; just as they could never master the English language. They forced both to conform to the Celtic idiom. The language spoken throughout Ireland is still Irish, with English words substituted for the corresponding Irish words; and it is on the syntactic anomalies thus produced that the inventor of "Irish" jokes depends for his livelihood,

[1] For a list of Irish examples see JRSAI xxiv pp. 77, 392: for illustrations of individual specimens see the same volume, p. 27, also xli p. 385: JCHAS II vol. xviii, appendix of "Historical Notes," plate facing p. 127: H. C. Lawlor, "Grotesque carvings improperly called Sheela-na-gigs," *Irish Naturalist's Journal* I, p. 182.

[2] Of the first of these I can speak from personal knowledge; for the second, see M. A. Murray and A. D. Passmore, "The sheela-na-gig at Oaksey," *Man* xxiii no. 86.

although his attempts at reproducing the real idioms of this extremely difficult dialect are, as a rule, fatuous beyond conception. The architecture practised in Ireland throughout the Middle Ages was, in like manner, Celtic, with a Gothic veneer. In consequence, we find in Irish mediæval churches an endless succession of anomalies: churches with the transept longer than the nave, as at the Black Abbey, Kilkenny: capitals with the abacus cut into delicate flowers, as at Corcomroe, Clare; arch-mouldings twisted into ropes, as at Clonmacnois: pointed arches with keystones, as in a small church on the Aran Islands; want of symmetry in groups of window-lights, as at Glenogra (Limerick),[1] or in the church on Inis Clothrann in Loch Ree:[2] a chancel roofed with a barrel vault at right angles to the main axis of the building, as at Kilmaine (Mayo); there seems to be no limit to the indifference to the "rules of the game" which the Irish architects display, when designing Gothic churches. A list of such eccentricities, which extend to every detail—doors, windows, tracery, mouldings, plans—would be almost as long as a list of the Gothic buildings in the country. The small church of St Duilich's, near Dublin, with its congeries of small monastic cells in the tower, is one of the strangest ecclesiastical buildings in existence.[3]

But just as a foreigner speaking English often hits upon a phrase which is not English in the least—which it would never enter the head of a native of England to concoct—and yet which is strikingly expressive, so the Irish architects not infrequently produce a bold stroke of originality out of their very inexperience and independence of tradition.

In England, whence no doubt the Gothic style was imported into Ireland, Gothic buildings can be classified into styles, each distinctive of a special period. The most satisfactory classification is fourfold; the *Lancet* (twelfth to thirteenth centuries), *Geometrical* (latter half thirteenth century), *Curvilinear* (fourteenth century to the Black Death, 1349), and *Rectilinear* (1349 to first half of sixteenth century). Underlying the infinite variety of Gothic detail there is a unity, we might almost say a uniformity; a skilled observer can, in most cases, date an ancient church building in England to within five-and-twenty years, by considering its mouldings, window-tracery, floral sculpture, shapes of arches, and other details.

[1] JRSAI xxv p. 378. [2] *Ibid.* xxx p. 73.

[3] This church deserves a fuller account than it has yet received: see JRSAI xliv p. 26: Archdeacon Lindsay, "St Doulagh's Church" (a pamphlet: Dublin 1910). J. H. Todd "Memoir of the Church of St. Duilech," PRIA vii p. 141.

Nothing of this kind is possible in Ireland. Mouldings, the chief key to architectural history in Gothic buildings, here fail us ; they are found, it is true, in most Gothic buildings, though some have none, or practically none : but as a rule they are too poor and commonplace, or else too eccentric, to be reduced to any chronological scheme. Certainly, all the rules for dating buildings by the mouldings, which work out with an almost mathematical precision in England, break down hopelessly in Ireland. In other details of building, the Irish architects did not move with the advance of evolution. They continued to build and to repeat styles of windows and of archways that had elsewhere become obsolete. In consequence, the late buildings are often strange conglomerations of details, selected from different styles. We may see Lancet windows with Geometrical mouldings, or Lancet and Late Gothic windows side by side in the same wall, and to all appearance contemporary. In a country where Gothic architecture had been a healthy natural growth, such incongruities would have been impossible.

I have just written " Lancet and Late Gothic " in preference to " Lancet and Rectilinear ". In England many of the traditions of the masons' craft were lost in the great calamity known as the Black Death. The delicate curved lines of tracery and moulding which had characterized the Curvilinear, the richest period of English Gothic, suddenly gave place to stiff gridirons of vertical and horizontal straight lines ; the richness of the applied decoration of the earlier period gave place to a fussy minuteness of detail, with no real inspiration behind it. It is a most notable fact that this " Rectilinear " phase is practically absent from Irish Gothic. It is not quite easy to explain how this may be, considering that the Rectilinear phase lasted longer in England than any other, that it is the style followed in some of the most important buildings in that country, and that there was constant communication between the two islands. The Rectilinear style is a purely English growth. It is absent from France, except in districts which at the time were under English control ; elsewhere its place is taken by a Curvilinear development, in which the tracery-openings are made narrow, and of a wavy, flame-like character. On this account the latest phase of French Gothic is called *Flamboyant.* Now, though Flamboyant Gothic is very rare—practically non-existent—in England, it is not uncommon in Ireland. There must have been a very distinct French influence on the country at the time, to have produced such fine examples of Flamboyant work as a tomb in St Nicholas Church, Galway, another at Athenry, and Flamboyant windows

at Kilconnell[1] and at Kilcooley (Tipperary)—the latter a very remarkable example.[2]

An effective feature in the later Gothic buildings in Ireland is the *stepped battlement*, with which walls and towers are generally crowned. The parapet at the top of the wall is broken by crenellations; but instead of the blocks of masonry between the crenellations being rectangular, they narrow upward by steps. Usually there are only two steps at each side of the crenellation, but at each of the corners of square towers the parapet rises into a turret with, as a rule, three steps on each side, often terminating upwards with pinnacles. The tower of Jerpoint (Kilkenny) is a good example of this type, but it is common throughout the country.

Doubtless the peculiarities and the weaknesses of Irish Gothic reflect the troubled political conditions of the country. Six years before the Anglo-Norman invasion the doorway of Clonfert Cathedral had been built, revealing a strength which would have risen to higher triumphs, had the country been allowed to develop along her own lines. Instead, a foreign architectural idiom was suddenly imposed on the country, and the native architects were not ready for it. To the end it remained foreign: the native efforts to grapple with it must be pronounced interesting failures. Transitional buildings, from Romanesque to Gothic, are extremely rare in the country: the Augustinian Friary at Cong, and the south transept of Christchurch Cathedral, are the only important examples known to me.

There is another fact which must not be forgotten in this connexion: namely, the influence of the Cistercian order. After the foundation of Mellifont in 1142, the country became covered with a network of Cistercian houses, which presented the most prominent object-lessons in Gothic design that the country possessed. Other orders were, of course, represented among the mediæval monasteries, but the Cistercians were in a great majority. The strict rule of the Cistercians forbade all unnecessary ornament; and the studied simplicity of their buildings is imitated, even in churches not connected with their order. This is especially to be noticed in the window tracery. The absence of ornamental cusps in the tracery-openings gives a barren appearance to the window; and the tracery itself is limited, as a rule, to feeble reticulations, as in the east windows of Holycross or of Muckross. Here and there a few good

[1] F. J. Bigger, "The Franciscan Friary of Kilconnel, Co. Galway," JGAHS i p. 145: a very fully illustrated article.

[2] Figured in *Journal* of the Ivernian Society vi p. 137.

windows are to be seen—at Cashel, at Clonmel,[1] at Athenry,[2] and at Portumna, for example; the last-named is of a beautiful and most unusual design.

Floral sculpture, especially in the later buildings, is flat and stiff. A favourite motive of floral decoration is a group of three leaves, of lozenge shape, set in a cruciform disposition so as to form a larger lozenge. This device is often developed elaborately. A peculiar Irish device is a spray of leaf-work of this kind running horizontally from the bottom of a triangular corbel.

How far the comparative poverty of the sculptured decoration was compensated for by applied ornament—embroideries, metal-work, and wall-paintings,—we cannot say, owing to the loss of materials for forming a judgement. In the roofless churches of Ireland these could have no chance of surviving. Traces of late wall-paintings are to be seen in a few buildings —Holycross, Knockmoy, Clare Island: [3] examples at Youghal and at Killaloe are also on record.[4] But it must be admitted that all these are more curious than beautiful.

Architecture: Castles

It is not the churches, however, which are the most characteristic buildings of mediæval Ireland. The essential facts of Anglo-Irish history are crystallized in the *castles*.

Of these there is a large number, each telling of an intruding baron who had to shelter himself from the hostility, first of those whom he had dispossessed and reduced to vassalage, and secondly of any fellow-marauder with whom he may have had a private quarrel. The castle is the symbol and monument of feudalism. We have already pointed out the analogy between the Norman baronial castles and the crannóg lake-dwellings of earlier invaders. In both cases the motive of erection was the same; the necessity of defence against the nearest neighbours.

The evolution of the Castle in mediæval Ireland is much more easily traceable than the evolution of the Church. The history of Gothic Architecture in Ireland cannot be recovered, owing to the patchwork of styles which the churches display. But the Castle was always kept up to date, and it followed the same lines of development as it followed in England.

The earliest of the defences erected by the Anglo-Norman barons were of the *motte-and-bailey* type. This consists (*a*) of

[1] Figured in JRSAI xxxix p. 251.
[2] *Ibid.* xliii p. 201.
[3] For Knockmoy see *Dublin Penny Journal* 12 Jan. 1833 p. 228: Glynn and Cochrane in JRSAI xxxiv pp. 239, 244: H. S. Crawford, JRSAI xlix p. 25. For Holycross see Crawford, JRSAI xlv p. 149. For Clare Is. see PRIA xxxi part ii plates iv, vi.
[4] JKAS iii p. 344.

a *motte*, a mound of earth, flattened on the top, and with sloping but steep sides, surrounded in some cases with (*b*) a *ditch*, spanned by a wooden bridge. At the foot of the motte is (*c*) an enclosure surrounded with earthen or palisade walls, called the *bailey*, in which were erected the subsidiary buildings of the establishment. On the summit of the motte was erected (*d*) the *bretesche*, a tower of wood, which was the stronghold proper. To this the household retired in times of stress; during their intervals of quiet they passed their time in the less confined bailey.

An illustration of such an establishment in actual use is to be seen on the Bayeux Tapestry: and remains of them are to be found wherever the Normans imported their feudalism —in Normandy,[1] England, Southern Scotland, and Ireland, especially to the east of the last-named country. Naturally, the wooden structures have disappeared; but the motte remains, with the bailey rampart at its foot. Examples are to be seen in many places: Dundalk (the so-called Cu-Chulaind's Fort); Castletown; the miscalled *Ráith Celtchair* at Downpatrick;[2] etc. Elsewhere place-names preserve the memories of such structures, such as *Moate* (the motte), *Ballymote* (the bailey of the motte), *Brittas* (the bretesche). The flat top distinguishes the motte from a bronze-age tumulus; but there is a liability to confusion with an inauguration or assembly-mound (such as that at Cruachu, now Rathcrochan (Roscommon)), which is likewise flat-topped. In cases of ambiguity only documentary evidence will settle the matter: if the records shew that a castle existed at the spot, then the structure must be pronounced a motte. Excavation is not always conclusive; for sometimes the earth in the heaped-up mound contained antiquities by accident, and if these were found, very misleading deductions might be made as to the date of the mound. The motte at Greenmount, when excavated, yielded a polished stone axe head, as well as the slip of bronze with a Runic inscription, mentioned earlier in this chapter.

In some cases it seems that the Normans found a mound already existing, and adapted it to their own purposes. Probably the gigantic mound of Knockraffon (Tipperary), the largest artificial mound in Ireland, is a case in point. It is of the shape of a motte, but is much larger than any normal example. Probably it is an adaptation of an ancient tumulus.[3]

[1] On mottes in France, see G. de Mortillet, "Les Mottes," *Revue de l'école d'anthropologie* v (1895) p. 261.

[2] See the account of the excavation of this structure by H. C. Lawlor, BNHPS 1918-20 p. 105.

[3] It is described by Dr. G. H. Orpen in JRSAI xxxix p. 275. The origin of mottes was for a time a bone of contention in Irish Archæology, though the con-

The motte-and-bailey could never have been more than a temporary structure. The wooden bretesche was liable to be destroyed by fire, and, in fact, was often so destroyed. So soon as the Normans had established themselves securely, they substituted stone for wood. The earthen motte, which could bear a wooden tower, would naturally not support a heavy structure of stone; it was accordingly abandoned when a stone castle was built. We may often see the deserted motte standing in the neighbourhood of a stone castle.

The course of evolution through which castles passed, both in England and in Ireland, was a direct result of the improvement in methods of attack which were gradually evolved: the invention of various kinds of siege-machines and instruments for throwing projectiles and for battering walls, which made the old flimsy palisades quite inadequate. The substitution of a stone curtain-wall for the palisade of the bailey was the first step in the development. This had taken place already in England in the last quarter of the eleventh century: but the first Norman strongholds erected in Ireland were of the earlier type, with earthen or wooden bailey walls, partly because they had to be erected in a hurry, and partly because the methods of attack known to the native Irish were still crude, and were not adapted to a successful onslaught on the previously unknown Norman castle buildings. A stone wall surrounding the top of the motte, taking the place of the stockade which originally enclosed the bretesche, was the next step in the development: and thus we reach the stage of the abandonment of the motte altogether. The summit of the motte, with its surrounding wall, becomes the inner bailey (not, however, raised on the top of a mound); and the bretesche develops into the stone keep, the most important part of the defences of the castle.

A complete mediæval castle consists thus of three main parts: the outer bailey, the inner bailey, and the keep. These enclosures may be, and generally are, concentric; the inner bailey completely enclosing the keep, and the outer bailey completely enclosing the inner bailey; but sometimes the inner bailey is, as it were, a compartment of the outer bailey. Special circumstances of site, or the resources at the disposal of the builders, would naturally modify the conventional plan in individual cases. The outer bailey is often absent, in which case the castle consists of a keep with one enclosure only surrounding it.

troversy has now died down. Papers by Mr. Westropp and Dr. Orpen (JRSAI xxxiv p. 313, xxxvii p. 123, xxxix p. 313) may be mentioned among the literature of the subject as containing valuable facts apart from polemics.

A *columbarium*, or dove-cote, is sometimes found associated with castles. The normal form is a squat circular tower, with pigeon-holes covering the inside surface. There is a good example at Buttevant (Cork).[1] The pigeons were, of course, kept for the table: we remember the "dish of doves" which figures as a dainty in the *Merchant of Venice*.

Subsequent developments are due to two causes—to an increasing desire for comfort, such as the confined keeps, with their narrow staircases and their sleeping-chambers in the thickness of the walls could not offer: and the development of fire-arms, which ultimately made the thickest wall of defence of no avail. At the same time the advance of civilization, in making life more peaceful and less open to the alarms of war, gradually diminished the necessity for elaborate defences. The keep became more and more domestic in its appointments: the bailey wall disappeared: and thus the mediæval castle developed into the Tudor manor-house. The change may well be seen at Carrick-on-Suir, where the fine but now much dilapidated sixteenth-century Ormonde mansion stands in immediate juxtaposition to the Edwardian castle, its predecessor.

Many of the so-called castles of Ireland are mere *pele-towers*, that is, palisaded and fortified residences. Puck's Castle, south of Dublin, is a good typical example, but there are dozens scattered through the country.

Town fortifications remain in a few of the mediæval towns, such as Athenry and Youghal.[2] A few good manor-houses remain, at least in ruin; the Ormonde Mansion at Carrick-on-Suir, just mentioned, is the best of these.

Conclusion

As we review the products of mediæval Ireland, we see everywhere a sad decline from the achievements of Celtic Ireland. All the skill, all the devotion to labour, these are snuffed out like the flame of a candle. Illumination there is none: metal-work is pitifully feeble: sculpture is stiff, formal, and uninspired; in architecture there are occasional interesting and even effective freakishnesses, and two or three good buildings, such as Kilkenny Cathedral; but in comparison with Gothic architecture elsewhere, no really notable work.

The mediæval period ends with the downfall and spoliation of the monasteries, which assuredly robbed the country of

[1] Described by R. R. Brash in JKAS ii p. 266.
[2] On these see JRSAI xxxiii p. 307: JCHAS II vi p. 156.

literary and artistic treasures untold.[1] In quick succession there follow on the sorry " religious " wars ; the foul iniquities of Cromwell ; the Penal Laws ; the Great Famine ; the Clearances. . . .

But these events are not our present concern ; and we may, in closing, call to mind a pleasing convention of the old musicians. It was their habit to end a melancholy composition, in the minor mode, with a major chord, called a *tierce de Picardie ;* which relieved the gloom for the hearer, and sent him away with a note of hope. This chapter has been in the minor mode ; we may now strike our *tierce de Picardie*, as we bid our reader farewell. In these tempestuous days of ours, the young Free State of Ireland trims her argosy, and sets forth in courage and aspiration to voyage over the uncharted seas of the Future. Four thousand years ago her people guided the first faltering steps of the Folk of the North on the way of civilization. Twelve hundred years ago they shepherded a war-broken Europe upon the way of learning and the way of Life. May she prove worthy of her ancient past ; may she find that once more she has a mission to a bewildered, rudderless world : and may God be her speed in its fulfilment !

[1] A faint idea of this pillage will be obtained from a perusal of the documents printed by Mr. C. McNeill, " Accounts of sums realised by sales of chattels of some suppressed Irish monasteries," JRSAI lii p. 11.

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